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BEFORE THE ARIZONA CORPORATION COMMISSION P 2:33

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AZ CORP COMMISSION
DOCUMENT CONTROL

IN THE MATTER OF THE APPLICATION OF
ALLEGHENY ENERGY SUPPLY COMPANY, LLC
FOR A CERTIFICATE OF ENVIRONMENTAL
COMPATIBILITY FOR CONSTRUCTION OF A
1,080 MW (NOMINAL) GENERATING FACILITY
IN SECTION 35, TOWNSHIP 3 NORTH, RANGE
11 WEST IN LA PAZ COUNTY, ARIZONA AND
AN ASSOCIATED TRANSMISSION LINE AND
SWITCHYARDS BETWEEN AND IN SECTION 35,
TOWNSHIP 3 NORTH, RANGE 11 WEST AND
SECTIONS 23-26, TOWNSHIP 3 NORTH, RANGE
11 WEST ALSO IN LA PAZ COUNTY, ARIZONA.

DOCKET NO. L-00000AA-01-0116
CASE NO. 116

ALLEGHENY'S BRIEF

Arizona Corporation Commission

DOCKETED

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Allegheny Energy Supply Company, LLC submits this brief in support of the

January 30, 2002 Certificate of Environmental Compatibility (CEC) issued to Allegheny by the
Power Plant Siting Committee. The Siting Committee evaluated the evidentiary record and
voted 9-1 to issue the CEC to Allegheny. The approved CEC contains 40 separate conditions
addressing all of the siting factors set forth in Ariz. Rev. Stat. 40-360.06(A). A copy of the CEC
is attached as Appendix A. The Commission should affirm the Siting Committee's decision and
adopt the approved CEC.

I. BRIEF STATEMENT OF THE RECORD.

Humorist Haythum Khalid once said: "All power corrupts, but we need
electricity." La Paz County and the state of Arizona need the La Paz Generating Facility (the
"Project" or "La Paz") because (1) it provides a number of power system benefits to Arizona, (2)
it meets the economic development needs of La Paz County, (3) it meets the electric generation

needs of Arizona and (4) it will have no adverse environmental impacts:

- **No Adverse Biological, Cultural or Environmental Impacts.** The evidence presented at hearing demonstrates that La Paz will have no adverse biological, cultural or environmental impacts.
- **Overwhelming Community and Local Support.** La Paz boasts overwhelming local and community support, including both state representatives and the state senator for the area, the La Paz County Board of Supervisors and a host of government officials and local citizens. La Paz will provide millions of dollars in tax revenues to the County and State along with major economic opportunities.
- **No Adverse Water Impacts.** The La Paz plant will have minimal water impacts on the underlying aquifer. No active water user will be substantially impacted by the Plant's water usage. Further, Allegheny has committed to recharge 60,000 acre-feet of water over the life of the plant. When added to recharge from the nearby Vidler Recharge Facility, the plant's water usage will draw only 0.7% of the available water supply in the underlying aquifer.
- **La Paz Serves Arizona's Electricity Needs.** For 2005, when La Paz is scheduled for full commercial operation, WSCC forecasts demand in the combined AZ/NM/MV region of 26,000 MW. That figure includes a projected 24% reserve margin. But from 2005-2010, WSCC forecasts a sharp decline in reserve margins--dropping from 24% in 2005 to 12% in 2010. The 2005 WSCC forecast also includes 2,840 MW of Arizona plants that either have been cancelled or likely will be delayed beyond 2005. Without those plants, 2005 margins will decline to 12-13% or worse. That's not to mention reserve margins for 2006-2010. The Project serves Arizona's and the region's future power needs.
- **La Paz Offers a Variety of Unique Power System Benefits to Arizona.** La Paz offers a variety of unique and substantial benefits to Arizona. Those benefits include a 100 kW solar array, an opportunity to retire more costly and less efficient plants, a commitment to millions of dollars in transmission upgrades to the Arizona transmission grid, reserve sharing and ancillary services and increased transmission reliability with the new Project switchyard. Allegheny also is the only applicant to come before the Commission with a proposed natural gas pipeline project (called the Desert Crossing Project) to serve Arizona's needs.

Under Ariz. Rev. Stat. § 40-360.06(A), the Siting Committee's approved CEC addresses all of the pertinent statutory factors and the Commission should confirm the Certificate.

II. THE PUBLIC NEEDS FOR AND BENEFITS OF THE LA PAZ PROJECT.

A. The Proposed La Paz Generating Facility Site Is Ideal for a Power Plant.

Allegheny's Project Manager Kevin Geraghty and Allegheny's environmental

1 consultants (URS) testified that the La Paz project site is ideal for a power plant.¹ It is located in
2 La Paz County approximately 80 miles from central Phoenix. The plant site is remote in every
3 sense of the word. It is 50 miles from the Phoenix non-attainment area and there is only one
4 nearby resident who is located two miles north of the plant site on the other side of I-10.

5 La Paz conforms to the land uses in the project area. The site is located at an
6 existing I-10 interchange less than two miles south of the existing Devers/Palo Verde 500 kV
7 transmission line. The Vidler Recharge Facility is located two miles west and the El Paso
8 Natural Gas Pipeline is located 4-5 miles south of the site. See 9/4/01 Hearing Transcript
9 ("Tr."), pp. 42-45, 120-124.

10 **B. The La Paz Generating Facility Will Have No Adverse Biological or Cultural Impacts.**

11 Both Arizona Game & Fish and the State Historic Preservation Office
12 acknowledged that there would be no adverse biological or cultural impacts from La Paz. See
13 12/14/01 letter from John Kennedy, Hearing Exhibit A-31(Appendix B); 10/22/01 letter from
14 Matthew Bilsbarrow, Hearing Exhibit A-8 (Appendix C). La Paz is located on and surrounded
15 by previously disturbed land; field surveys confirmed the absence of special status species or
16 habitats. Thus, the underlying record contains no evidence of any potentially adverse biological
17 impacts. See 9/4/01 Tr., pp. 115-130, 161. Even so, in consultation with Arizona Game & Fish,
18 Allegheny agreed to several biological conditions in the CEC. See CEC Conditions 26-30;
19 11/3/01 Tr., pp. 285-300; 1/15/02 Tr., pp. 1417-1428.

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21 ¹ In the words of La Paz County Supervisor Jay Howe: "The location that
22 [Allegheny has] chosen in La Paz county is ideal and will have virtually no negative impact to
23 La Paz County." See 9/4/01 Tr., pp. 102-103. La Paz County Tax Assessor George Nault
24 repeated that sentiment: "I'm the La Paz County tax assessor, and I also live in the third district
where the plant is scheduled to go....if we had our choice of where it should have went, we
couldn't have gotten any better than what Allegheny has done." Id. at pp. 9-10.

1 Yet another environmental benefit of the Project is the associated land exchange
2 with the United States Bureau of Land Management. As part of the Project, Allegheny and BLM
3 intend to exchange 480 acres of BLM land near the Project's well site for approximately 1500
4 acres of land near Sears Points in the Yuma area. See 1/16/02 Tr., pp. 1627-1628. Sears Points
5 is a culturally and historically significant Arizona site. The land exchange will allow BLM to
6 extend the archeological protection zone around Sears Point. Id.

7 **C. The La Paz Facility Has Overwhelming Local and Community Support.**

8 State Senator Herbert Guenther and State Representatives James Carruthers and
9 Robert Cannell supported the project and urged approval. See 11/8/01 letter, Hearing Exhibit A-
10 20 (Appendix D). Likewise, the Chairman of the La Paz County Board of Supervisors, the local
11 La Paz County Supervisor, the County Tax Assessor, the President of the McMullen Valley
12 Chamber of Commerce, the President of the Wenden School District, the County Development
13 Director, the County Sheriff, the Quartzite Fire Chief, the Arizona Department of Commerce,
14 and local citizens all attested to the positive impact of the plant on Arizona and local residents.
15 See 9/4/01 Tr., pp. 7-13, 98-105; 11/13/01 Tr., pp. 216-222; 11/14/01 Tr., pp. 496-502.

16 The Project will provide substantial economic and development benefits to the
17 community, including several hundred construction jobs and 30-40 permanent jobs. Allegheny
18 commissioned the Arizona State University Center for Business Research to evaluate the
19 economic impacts of La Paz on the county and state economies. The ASU Report is attached as
20 Appendix E. As noted in the report, total (direct and indirect) state and local tax revenues from
21 the plant will be several millions of dollars per year. Id. at p. J-1-1. The Plant will substantially
22 benefit La Paz County and provide a rare opportunity for positive economic development.

23 **D. The La Paz Generating Facility Will Have No Adverse Water Impacts.**

24 The Project's location also is ideal because there is an ample water supply and

1 groundwater withdrawals will have no adverse impacts on the aquifer or any water users. Just a
2 few months before Allegheny purchased the water rights necessary for the plant, the Arizona
3 Legislature enacted Ariz. Rev. Stat. § 45-440. It authorizes groundwater withdrawal for
4 industrial purposes, including power plants in "subsequent irrigation non-expansion areas." La
5 Paz is located in the only subsequent INA in Arizona--the Harquahala Valley INA.

6 The statute specifically authorizes groundwater withdrawals for power plants as
7 long as the (i) the groundwater table does not decline more than 10 feet per year, (ii) the
8 withdrawals don't exceed more than six acre-feet of water per year, and (iii) the withdrawals
9 don't exceed 30 acre-feet for any ten year period. See Ariz. Rev. Stat. § 45-440(A). Based on
10 that statute, Allegheny purchased 2,319 acres of irrigable land (at a cost of \$9 million) and the
11 record is undisputed that withdrawals for the plant will comply with the statutory requirements.
12 See 11/13/01 Tr., pp. 329-339.

13 As testified by URS hydrologist Dave Carr, the aquifer contains approximately
14 15,000,000 acre-feet of groundwater. See 11/13/01 Tr., pp. 341-343. The La Paz Facility will
15 use approximately 6,500 acre-feet of water per year for plant operations. That water use reduces
16 the land's historic and potential agricultural groundwater use by over 40% or about 130,000
17 acre-feet over the plant's life.² Id. at 342-343. Assuming no recharge, the La Paz Facility will
18 draw only 1.4% of the underlying aquifer's groundwater supply. Id. at 342. Even the Unions'
19 hydrologist, Ken Schmidt, agreed that water use from the plant constitutes "only 1.4 percent of
20 the total water" in the aquifer See 11/14/01 Tr., pp. 620-621. He also testified that the plant will
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22 ² As Line Siting Committee Member and ADWR designee Greg Houtz noted: "In
23 INAs, what has been grandfathered is the acreage that is eligible to be irrigated with
24 groundwater...Theoretically, if farmers in the Harquahala INA wanted to grow rice and have rice
paddies 12 months of the year, they have the legal right to do so." See 1/22/02 Tr., pp. 9-10.

1 have "no substantial impacts" on users in the Harquahala Valley Irrigation District. Id. at p. 618.

2 Those minimal impacts drop even further when recharge is factored into the
3 equation. The plant site is located near the Vidler Recharge Facility. ADWR anticipates that
4 Vidler will recharge approximately 30,000 acre-feet/year and Vidler has been recharging near
5 those levels for several months. By statute, Vidler is required to leave behind 5% of that
6 recharge amount, which is sometimes referred to as the "tip to the aquifer." Over the life of the
7 La Paz plant, Vidler will leave a minimum of 45,000 acre-feet of recharged water in the aquifer.
8 See 11/13/01 Tr., pp. 329-340, 357-358. Allegheny also has committed to recharge an additional
9 60,000 acre-feet of water (through recharge of CAP water or purchase and retirement of active
10 irrigation lands) during the life of the plant. See CEC, Condition 3.

11 The bottom line is that with Allegheny's recharge commitment and Vidler's
12 recharge, the plant will draw only 0.7% of the existing aquifer. Without recharge, drawdown in
13 the vicinity of the plant will be only 25-30 feet over the 30 year life of the project (approximately
14 1 foot per year) compared to the statutory allowed maximum of 10 feet per year. See 11/13/01
15 Tr., pp. 341-346. There will be drawdown of approximately one to two inches per year for the
16 nearest active well in the HVID. Id. With Vidler, but not Allegheny's recharge accounted for,
17 the water table actually increases by 25 feet. Id. The Arizona Department of Water Resources
18 evaluated and approved Allegheny's water reports and analyses. ADWR supports the Allegheny
19 project. See November 21, 2001 letter from Joseph Smith, Hearing Exhibit A-21 (Appendix F).
20 By any measure, the record contains no evidence of adverse water impacts from the La Paz
21 facility.³

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23 ³ At hearing, Commission Staff Engineer Jerry Smith agreed that there was no
24 problem related to overutilization of water resources. See 1/15/02 Tr., pp. 1254-1255. Except
for transmission issues, Mr. Smith also agreed that La Paz meets the Staff's approval criteria. Id.

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1 twice the national average for the next 20 years. Id.; 1/16/02 Tr., pp. 1577-1578. Second,
2 various announced or certificated power projects simply can't be counted on in the next few
3 years. Typically, 50-60% of announced projects never go forward. See 9/4/02 Tr., pp. 77-79.
4 The current market situation makes that percentage even higher. See Exhibit A-28; 1/16/02 Tr.,
5 pp. 1578-1582. Recent market problems and low wholesale energy prices have resulted in an
6 avalanche of cancelled or delayed power projects. For Arizona alone, Mr. Mundy testified that
7 likely cancellations or delays include Gila River 3 and 4, Redhawk 3 and 4, Springerville 3 and
8 4, Montezuma and Reliant's Signal Peak plant. Id. Mr. Mundy also learned through discussions
9 with Southern California Edison (SCE) in January 2002 that over 5,000 MW of generation in the
10 SCE queue recently cancelled including one plant that was under construction. Id. at 1582-1583.

11 **F. Power System Benefits.**

12 La Paz also meets Arizona's needs for an adequate, reliable and economical
13 power supply by providing several additional power system benefits. Those benefits include an
14 opportunity to retire or replace the output from more costly and less environmentally friendly
15 plants, a commitment to millions of dollars in transmission upgrades to the Arizona transmission
16 grid, reserve sharing and ancillary services and increased transmission reliability with the new
17 Project switchyard. See Exhibit A-28; 1/16/02 Tr., pp. 1555-1565. La Paz provides several
18 unique power system benefits and features that place Allegheny in a league of its own.

19 To start, Allegheny has agreed to install a 100 kW solar photovoltaic array. See
20 11/13/01 Tr., pp. 228-230; CEC Condition 2. The solar array will meet a portion of the
21 Project's internal power needs. Also, La Paz is the first plant to connect to the Devers to Palo
22 Verde transmission line west of the Palo Verde Hub. That location protects the transmission grid
23 in two ways. One, the Project's switchyard "cuts" the Devers-Palo Verde line into two parts and,
24 therefore, increases reliability by ensuring that an outage on either side won't take down the

1 entire line. See 1/16/02 Tr., pp. 1560-1561. Two, the Project provides unique security in the
2 event of an outage at the Palo Verde Hub. In that event, La Paz provides a necessary support
3 link to re-route power and maintain service in Arizona and the region. Id. at 1607-1609.

4 Another distinct benefit of the La Paz plant is that Allegheny has committed to
5 upgrade the transmission system. Part and parcel of that commitment is that Allegheny will have
6 to fix transmission problems caused by other merchant generators. Id. at 1603-1605. Allegheny
7 is the first merchant generator to make that kind of commitment.

8 Finally, Allegheny is the only merchant generator proposing a natural gas pipeline
9 project (Desert Crossing) to serve the proposed plant. Allegheny, SRP and Sempra have
10 partnered to develop a new gas pipeline and storage project from Las Vegas (on the Kern
11 pipeline) through northern Arizona to the Wenden compressor station near La Paz on the El Paso
12 southern pipeline. See 1/15/02 Tr., pp. 1234-1235. The 10 billion cubic foot storage facility
13 would be the first gas storage facility in Arizona. As Staff witness Bob Gray stated, the Desert
14 Crossing pipeline would provide substantial benefits for the gas supply situation and provision of
15 reliable power in Arizona. Id. at 1235-1237.

16 **III. RESPONSE TO REQUESTS FOR REVIEW.**

17 Allegheny responds to the requests for review filed by Commission Staff and
18 Intervenor Arizona Unions for Reliable Energy (the "Unions"). As a matter of law and fact, the
19 underlying record doesn't support the arguments of Staff or the Unions.

20 **A. Staff's Transmission Arguments Are Not Well-Taken.**

21 In its request for review, Staff focuses exclusively on transmission issues.⁵ Staff

22 _____
23 ⁵ The lone exception is Staff's revised condition 40, which adds ADEQ to the list
24 of state agencies receiving the self-certification letter. Allegheny is puzzled by that Staff
suggestion because ADEQ was deleted from the list at the specific request of ADEQ
representative Mr. Tobin. See 1/16/01 Tr., p. 1451.

1 argues that the Commission should modify the CEC approved by the Siting Committee and
2 impose four amended conditions relating to transmission. Staff's request is premised on
3 ensuring that the La Paz Project "will only proceed to construction if it has no adverse impact on
4 the existing transmission system in Arizona or the operability of existing or other new Arizona
5 generation plants that precede Applicant's project." See Staff's Request for Review, pp. 1-2.
6 Staff supports La Paz with the inclusion of its five modified conditions.

7 On these issues, however, the underlying record doesn't support Staff's position
8 and arguments. The flaws in Staff's arguments stem from a fundamental misunderstanding of
9 the interconnection process for La Paz. As acknowledged by all of the experts in this case, these
10 transmission issues are within FERC's jurisdiction and are subject to rigorous reviews that assure
11 the La Paz Project can't adversely impact the transmission system. See 12/14/01 Tr., pp. 1163-
12 1164; 1/16/02 Tr., pp. 1358-1359, 1603-1604. Under FERC rules, the interconnection study
13 process works in three parts. First, Allegheny must apply to SCE and Cal-ISO for a system
14 impact study. That study evaluates the potential impacts of Allegheny's interconnection to the
15 grid. Here, as expected, SCE's impact study lists the problems which may result from La Paz's
16 interconnection to the grid. See 12/14/01 Tr., pp. 1014-1030.

17 Second, La Paz then must undergo a Facilities Study. During this phase, the
18 transmission providers evaluate what steps must be taken to ensure reliability. The Facilities
19 Study addresses what measures are required to resolve the issues identified in the System Impact
20 Study. Allegheny will not be allowed to interconnect to the grid until it has satisfied and
21 mitigated all of those impacts. See 12/14/01 Tr., pp. 1014-1030; 1/16/02 Tr., pp. 1603-1605.
22 The facilities study process is currently underway and SCE has indicated that Allegheny will be
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1 able to alleviate any impacts from its interconnection to ensure reliability of the grid. Id. at 1605.

2 A third element of the process is that Allegheny's interconnection and the various
3 studies will be discussed, evaluated and reviewed by all stakeholders in the grid, including
4 WSCC, WATS, the Palo Verde Engineering & Operations Group and a variety of others. See
5 Exhibit A-28. All of those stakeholders are charged with protecting the grid and ensuring that a
6 new interconnection won't jeopardize reliability. As part of the process, Allegheny has
7 committed to spend millions of dollars in transmission upgrades to the Arizona grid. See
8 12/14/01 Tr., pp. 1014-1030; 1/16/02 Tr., pp. 1555-1559. Unlike other merchant generators,
9 Allegheny not only will be alleviating problems from La Paz's interconnection, but also
10 problems caused by other merchant plants. Id.

11 Conditions 11 and 12 in the approved CEC adequately and properly address these
12 issues. Those conditions confirm that the transmission requirements will be completed and
13 commit Allegheny to additional contributions in the future. By contrast, Staff's amended
14 conditions 11, 12 and 41 are not supported by the underlying record or applicable law. Staff's
15 amended language attempts to micromanage a process which is beyond Allegheny's control and
16 beyond the Commission's jurisdiction. Such conditions are unnecessary because Allegheny
17 won't be allowed to interconnect unless La Paz will have no adverse impact on the grid. FERC,
18 Cal-ISO, SCE, WSCC, the Palo Verde E&O Group and a host of others will ensure the reliability
19 and security of the grid.

20 Staff's conditions also improperly require an evaluation of Arizona's "planned"
21 transmission system and "planned" generation. That requirement violates recently amended
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1 Ariz. Rev. Stat. § 40-360.02(C)(7), which requires ten-year plans including an evaluation only of
2 the “effect on the current Arizona electric transmission system.” (emphasis added)

3 Staff’s suggested conditions raise a host of interpretative and practical problems.
4 What precisely is the “planned Arizona transmission system”? Does it consist of projects in filed
5 ten-year plans, announced but incomplete upgrades or only projects with CECs? How does
6 Allegheny compel WATS or the Palo Verde E&O Committee to review and approve special
7 studies and reports they have no legal obligation to review and approve? What about planned
8 generation with a CEC which has announced it will not construct until after La Paz is on line?
9 What precisely is “no adverse impact” and how does Allegheny determine what a competitor’s
10 market is? These are just a few of the practical problems posed by Staff’s suggested conditions.

11 Staff’s conditions also should be rejected because Mr. Smith’s concerns are not
12 supported by the record and violate existing laws and regulations. Mr. Smith states that there is
13 only 6,050 MW of available transmission capacity out of the Palo Verde hub, while 8,000 MW
14 of new generation has been proposed to interconnect at Palo Verde. Mr. Smith then suggests a
15 condition requiring Allegheny to show existing transmission capacity for the full output of the La
16 Paz plant without displacing another generator. Id. at 1353. Fundamentally, however, those
17 transmission issues are subject to FERC jurisdiction. Mr. Smith’s own testimony acknowledges
18 that Staff’s position goes beyond existing rules and regulations. See 1/15/02 Hearing Tr., pp.
19 1272-1273. Mr. Smith acknowledged that “there is no such transmission rule or statute at
20 present” supporting his arguments and that FERC Order 888 “does not require that necessary
21 transmission construction accompany a plant interconnection...” Id. These issues also go
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1 beyond the statutory siting criteria set forth in Ariz. Rev. Stat. § 40-360.06(A).⁶

2 Staff's conclusions regarding possible, future transmission constraints at the Palo
3 Verde Hub also are misguided factually. Stated simply, either likely transmission improvements
4 or plant delays/cancellations will negate the issue. At hearing, Mr. Smith acknowledged various
5 transmission upgrades that would increase transmission capacity out of the Palo Verde Hub. Id.
6 at 1374-1378. Mr. Smith didn't take those upgrades into account. At the 1/16/02 hearing,
7 however, Mr. Mundy clarified that potential upgrades to the transmission system would allow
8 much more than 2,000 MW of additional transmission capacity out of the hub. See 1/16/02 Tr.,
9 pp. 1606-1607.⁷ Those improvements render Staff's concern moot.

10 Further, Mr. Smith's 8,000 MW of planned new generation for interconnection at
11 the Palo Verde Hub includes Gila River 3 and 4 (1,040 MW), Gila Bend (845 MW) and
12 Redhawk 3 and 4 (1,080 MW). Id. at 1278-1279. Those plants total 2,965 MW and recent
13 information indicates that they likely will be cancelled or delayed beyond 2005. With those
14 plants out of the picture, there is over 1,000 MW of available transmission capacity out of the
15 Palo Verde Hub--without any transmission upgrades or added capacity.

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17 ⁶ On these transmission issues, FERC has been crystal clear that new merchant
18 power plants can request interconnection under Order No. 888 without any request for
19 transmission service. See In Re Tennessee Power Co., 90 FERC ¶ 61,238 (2000). On March 4,
20 2002, the United States Supreme Court confirmed FERC's plenary jurisdiction over these
21 transmission issues. See New York v. Federal Energy Regulatory Comm'n, 535 U.S. ___, Dkt.
No. 00-658 (March 4, 2002). As a matter of law, the Commission may be involved in siting of
plants or transmission lines, but it has no authority to impose a moratorium on or place
conditions over a merchant generator's interconnection to the transmission grid.

22 ⁷ That additional transmission capacity would come from upgrades to the Devers-
23 Palo Verde line (400 MW), the Southeast Valley line (1000-1200 MW) and a variance request on
the Westwing line (2000 MW). See 1/16/02 Tr., pp. 1606-1607. That's not accounting for the
24 three planned 500 kv lines out of the Palo Verde Hub listed in Arizona Public Service's January
2002 ten-year plan.

1 Finally, Staff's proposed conditions are dangerous policy. The whole idea of a
2 competitive market is to encourage an open market. The more competitive generators, the lower
3 the prices. Staff's moratorium on additional CEC's would give existing certificate holders a
4 stranglehold on the market--regardless of whether or when they intend to construct. That's
5 neither wise nor fair. Electric consumers stand to suffer the consequences if that policy were to
6 be implemented by the Commission.

7 Mr. Smith's transmission arguments have it backwards. Historically,
8 transmission doesn't precede generation. It's the other way around. If a robust wholesale
9 market develops at the Palo Verde hub, market demand will drive new transmission. Staff's
10 position would bar any new generator from competing at the hub (unless the new generator
11 constructs a new transmission line). That policy isn't factually supported, violates FERC
12 procedures and would allow existing generators and certificate holders to wield substantial
13 market power.

14 **B. Staff's Two Line Conditions is Unsupported and Unnecessary.**

15 The second issue raised by Staff is its two-line condition. In amended condition
16 8, Staff proposes not one but two short transmission lines to the Devers-Palo Verde line, which is
17 only 1.75 miles north of the Project. At hearing, Mr. Smith proposed two lines based on
18 concerns related to "system reliability." See 1/15/02 Tr., pp. 1280-1288. But Mr. Smith didn't
19 support that testimony with any facts relating to reliability increases from such a condition.

20 By contrast, Mr. Mundy testified regarding the real costs and non-existent
21 benefits of such a proposal. The approximately 1 and 3/4 mile transmission line out of the La Paz
22 facility has an outage probability of 1/120. Put another way, that line will be 99.9% reliable.
23 See 1/16/02 Tr., pp. 1568-1569. The Project itself is only 95-98% reliable. That percentage, not
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1 a short line, is the limiting factor for increasing reliable delivery of power from La Paz. The cost
2 of a second line out of the plant would be \$6,000,000. Id. Staff's two-line condition imposes a
3 \$6 million requirement that will not increase reliability one iota. It is unnecessary and should be
4 rejected.

5 **C. The Unions' Request for Review is Not Supported by the Evidentiary Record.**

6 In their request for review, the Unions offer a variety of arguments and
7 conditions. The record doesn't support the various arguments and conditions proffered by the
8 Unions relating to transmission issues and environmental impacts.

9 **1. The Project Is Needed and Will Not Impair Arizona's Transmission System.**

10 At hearing, the Unions opposed the La Paz Project because of potential
11 transmission constraints at the Palo Verde Hub and based on alleged problems with reliability of
12 the system. Much like Commission Staff, the Union's witness on these points (David Marcus)
13 simply misconstrued the interconnection process. At hearing, Mr. Marcus conceded that these
14 transmission issues are subject to FERC jurisdiction. See 12/16/02 Tr., pp. 1170-1171. In turn,
15 all of the arguments and evidence noted above on these issues rebut Mr. Marcus' testimony.

16 In their request for review, the Unions also argue "that transmission system
17 upgrades required by Southern California Edison and funded by the applicant would be
18 inadequate to assure the reliability, safety and security of the system at the Palo Verde Hub."
19 See Unions Request for Review, p. 3. That argument is just plain wrong. Allegheny will be
20 allowed to interconnect only if it will have no adverse impact on the system. That is mandated
21 by FERC procedures, SCE's tariffs and is the very essence of the interconnection process. See
22 1/16/02 Tr., pp. 1590-1607.

23 The Unions' arguments on the issue of need for La Paz are equally flawed. At
24 hearing, Mr. Marcus generically contended that Arizona doesn't need the Project because

1 sufficient generation already has been approved. Mr. Marcus is gambling with Arizona's future.
2 On these issues as previously discussed, Mr. Mundy adequately and fully rebutted all of Mr.
3 Marcus' opinions. Mr. Marcus also ignored the fact that Allegheny has used transmission rights
4 from California to sell over 1,000,000 MW-hours to Arizona utilities in the last 30 months. Id.

5 Mr. Mundy discussed the factual errors in the numbers underlying Mr. Marcus's
6 testimony. Mr. Marcus relied on various projects purportedly under development without
7 references or names and he relied heavily on press releases noted on a California Energy
8 Commission document as a source for Arizona plants. Id. That information is unreliable and
9 the 2001 WSCC Report demonstrates Arizona's and the region's future power needs. Mr.
10 Marcus simply ignored WSCC's updated forecasts and declining margins. Id. at p. 1562.

11 Finally, Mr. Mundy exposed the fallacies of Mr. Marcus's testimony on the issue
12 of plant cancellation rates. He argued that Mr. Mundy overstated the cancellation rates for
13 various plants and Mr. Marcus claims that Arizona can count on all projects that have been
14 approved or are under construction. But recent industry events--including the cancellation of
15 5,000 MW (as well as a plant under construction) in SCE's queue--have confirmed Mr. Mundy's
16 testimony. Id. at 1578-1579. Nothing is certain in the power industry except that demand will
17 increase and "we need electricity."

18 **2. The Record Does Not Support a Dry Cooling Condition.**

19 Next, the Unions argue that the Commission should impose a dry cooling
20 condition for the La Paz Project. But, in proposing dry cooling, the Unions sidestep the
21 fundamental question that must be answered before even discussing dry cooling---is there any
22 factual justification to impose dry cooling for La Paz? Based on the evidentiary record, the

23 //

1 answer is no. Water pumpage from the plant will draw only 1.4% of the underlying aquifer
2 (assuming no recharge by Allegheny or Vidler) and only 0.7% of the aquifer with recharge.
3 There simply is no need for dry cooling at La Paz because there is an ample supply of water, the
4 plant will have minimal impacts on the aquifer, there are no impacts an any active water users
5 and Allegheny has water rights under § 45-440. See 11/13/01 Tr., pp. 329-343, 618-621.

6 The Unions also mischaracterize the underlying record regarding the economic
7 and technical feasibility of dry cooling at La Paz. The Union's dry cooling witness (Phyllis Fox)
8 has never designed, engineered or procured a dry cooling system for a combined cycle power
9 plant. See 11/14/01 Tr., pp. 700-702; 12/13/01 Tr., pp. 834-844. She also has never compiled a
10 cost estimate for a dry cooling system and she didn't perform any independent evaluation or
11 estimate for the La Paz facility. Id. Instead, Dr. Fox adopted preliminary evaluations of dry
12 cooling from unrelated plants in California. Dr. Fox's Exhibit I-18 is based on the Mountain
13 View Plant in California. In the Mountain View case, however, the California Commission
14 rejected Dr. Fox's dry cooling arguments and approved wet cooling. Id. at pp. 852-857.
15 Contrary to Dr. Fox's opinions, the California Commission also found that dry cooling is 2-4
16 times as expensive as wet cooling. Id.

17 The Unions' argument that dry cooling is "economically feasible" and used for a
18 "large number of similar projects" is inaccurate. In reality, dry cooling is used only in special
19 circumstances where water is not available (due to a scarce supply or high prices) or plant usage
20 would result in adverse water impacts. See 11/13/01 Tr., pp. 244-253, 380-407; 1/16/02 Tr., pp.
21 1453-1480. La Paz clearly doesn't fit into those categories. The Unions' suggestion that dry
22 cooling is used successfully in similar environments as La Paz also is inaccurate. Reliant's El

23 //

1 Dorado plant in southern Nevada is a perfect example of the severe problems associated with dry
2 cooling in desert environments. Since coming on line, El Dorado has had a capacity factor of
3 only 52% (due to heat rate impacts of dry cooling). See 1/16/02 Tr., pp. 1610-1615. Wet cooled
4 plants have capacity factors of 80% or more. Id. The El Dorado plant also has experienced
5 severe operational problems resulting from dry cooling. Chief among them are a heat rate of
6 7500 btu/kwh compared to an expected heat rate of 6900 btu/kwh for La Paz as a wet cooled
7 plant. This experience demonstrates that dry cooling is both technically and economically
8 infeasible for environments such as La Paz.

9 Dry cooling will cost \$40-58 million in added capital costs for La Paz. Unlike Dr.
10 Fox, Allegheny procured competitive dry cooling bids for La Paz from four experienced EPC
11 contractors. EPC stands for "Engineering, Procurement and Construction" and EPC bids form
12 the foundation for selecting a firm to build the plant and determining a final contract price. As a
13 result, competitive EPC bids are the best indication of the increased capital costs of dry cooling
14 for La Paz. Those bids ranged from \$40-58 million in increased capital costs for dry cooling.
15 See Exhibit I-20; 11/13/01 Tr., pp. 248-252; 1/16./02 Tr., pp. 1458-1465, 1610-1620.

16 Allegheny's project engineer (Black & Veatch) also provided an independent cost
17 estimate for dry cooling and parallel wet dry cooling indicating added costs of \$44 million for
18 dry cooling and \$31 million for parallel. Id.; Hearing Exhibit A-23. Allegheny's dry cooling
19 expert (Wayne Micheletti) performed a comprehensive nationwide study of dry cooling costs.
20 His evaluation concluded that dry cooling systems are 140% more expensive (in terms of capital
21 costs) than wet cooling systems. Those increased capital costs render dry cooling economically

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23 //

1 prohibitive.⁸

2 Dry cooling also is technically infeasible because of the associated energy
3 penalties. Allegheny's project engineer (Black & Veatch) and independent dry cooling expert
4 (Wayne Micheletti) both evaluated the engineering penalties associated with dry cooling at the
5 La Paz Project. See 11/13/01 Tr., pp. 252- 253, 391-398; 1/16/02 Tr., pp. 1610-1621. The
6 maximum energy penalty would range from 283-473 MW. Id. As stated by Allegheny's
7 business development director Paul Kramer, based on a conservative 10% yearly generation loss
8 at the La Paz site, dry cooling would result in \$44,397,527 in increased yearly costs to electric
9 consumers plus 1.5 billion cubic feet of increased gas usage. See Hearing Exhibit A-22; 1/16/02
10 Tr., pp. 1503-1510, 1515-1523. Added costs to consumers would be even greater during peak
11 summer demand periods because energy penalties from dry cooling occur when temperatures are
12 the highest--exactly when power is needed the most in Arizona. During those times, dry cooling
13 would result in substantial price volatility. Id. Because dry cooling is substantially less efficient
14 than wet cooling, dry cooling also causes increased air emissions. Dr. Fox acknowledged that
15 dry cooling will cause increased air emissions by as much as 5%. See 12/13/01 Tr., p. 770.

16 At hearing, Dr. Fox conceded that dry cooling is not the preferable option for La
17 Paz. Rather, Dr. Fox testified that parallel wet-dry cooling is her preferred option. But parallel
18 cooling is subject to the same problems noted above. Plus, parallel cooling systems have not

19 ⁸ Compared to the competitive EPC bids, the Project engineer's estimate and the
20 comprehensive report prepared by Mr. Micheletti, Dr. Fox's evolving cost estimates are
21 questionable and irresponsible. Originally, Dr. Fox offered a cost estimate indicating that dry
22 cooling was \$13 million less than wet cooling. See 12/13/01 Tr., pp. 867-868; Hearing Exhibit I-
23 3. Dr. Fox then revised that estimate and provided exhibit I-18 indicating that dry cooling was
24 \$5 million more than wet cooling. Id. at p. 868. Dr. Fox then revised her numbers yet again and
offered an amended Exhibit I-18 which indicated that dry cooling was \$13 million more than wet
cooling. See Revised Hearing Exhibit I-18. Incidentally, Dr. Fox's "final" estimate is based on
an error factor of +/- 30%. Id. at p. 869.

1 been proven operationally and are subject to substantial technical and performance questions.
2 See 1/16/02 Tr., pp. 1473-1477. Except for a single plant in Argentina, only a few parallel
3 systems have been built worldwide and none at plants with generating capacities greater than 40
4 MW. Parallel cooling also doesn't provide any tangible water resource benefit for La Paz
5 because, according to Dr. Fox's numbers, a parallel wet/dry system would result in reduction of
6 water usage by approximately 40-50%. Id. at p. 774. By comparison, the recharge and water use
7 restrictions in the approved CEC result in reduced aquifer consumption by over 50% (Allegheny
8 and Vidler will recharge a minimum of 105,000 acre-feet over the life of the project which is
9 54% of the total expected water use).

10 Finally, the biggest strike against dry cooling is the recent position taken by EPA.
11 For some time, EPA has been developing rules for new and existing facilities under § 316(b) of
12 the Clean Water Act. EPA finalized its rules for new facilities in November 2001 and rejected
13 dry cooling as best technology available based on capital costs and energy penalties. See 1/16/01
14 Tr., pp. 1465-1469. Here's what EPA said about dry cooling in its technical report:

15 ...EPA concluded that dry cooling systems do not represent the best technology available
16 for a national requirement...First, EPA concluded that dry cooling is not adequately
17 demonstrated for all facilities within the scope of this regulation. As noted previously,
18 the majority of operating or planned dry cooling systems are located either in colder or
19 arid climates where the average dry bulb temperature of ambient air is amenable to dry
20 cooling. As demonstrated in Chapter 3, the comparative energy penalty of a dry cooling
21 plant in a hot environment at peak summer conditions can exceed 12 percent at a facility,
22 thereby making dry cooling extremely unfavorable ...Dry cooling technology has a
23 detrimental effect on electricity production by reducing energy efficiency of steam
24 turbines, especially in warmer climates. The reduced energy efficiency of the dry cooling
system will have the effect of increasing air emissions from power plants. Lastly, EPA
concluded that the costs of dry cooling systems may be significantly prohibitive so as to
pose barriers to entry for some new plants that may discourage the construction of new,
more energy efficient plants.

See Technical Development Document for the Final Regulations Addressing Cooling

1 Water Intake Structures for New Facilities (EPA-821-R-01-036) November 2001, Chapter 4, pp.
2 13-14 (relevant pages attached as Appendix H).⁹

3 **3. The Project's Evaporation Ponds Do Not Pose Any Adverse Biological Risks.**

4 Next, the Unions' propose that the Commission eliminate the La Paz Project's
5 evaporation ponds and order Allegheny to install a Zero Liquid Discharge System (ZLD). The
6 Unions' stated reason is that the evaporation ponds pose a biological risk to birds and wildlife.
7 That argument misstates the record and the testimony.

8 On these issues, Allegheny has proposed to construct the evaporation ponds with
9 mitigation measures designed to minimize any impacts on birds and wildlife. Those mitigation
10 measures include fencing and steep slopes (3:1) to prevent wildlife use and a synthetic plastic
11 liner to prevent growth of potential food sources. Allegheny's biological expert (Dr. Joe Platt)
12 testified that those measures would eliminate any adverse impacts on birds and wildlife. See
13 1/15/02 Tr., pp. 1417-1428. Further, Allegheny and URS consulted Arizona Game & Fish on
14 those issues. The Department evaluated potential issues relating to the evaporation ponds and
15 approved Allegheny's mitigation measures. See 12/14/01 letter from John Kennedy, Hearing
16 Exhibit A-31 (Appendix B). Finally, the Unions' own biologist, Dr. Terrill, agreed that
17 Allegheny's mitigation measures will result in a "substantial reduction in the overall impacts"
18 from the evaporation ponds. See 12/13/01 Tr., p. 940.

19 **4. The Unions' Additional Arguments Are Not Supported by the Evidentiary Record.**

20 The Unions' remaining arguments are equally unsupported by the factual record,
21 testimony and evidence. The Unions' visibility and air quality arguments aren't even remotely
22

23 ⁹ At hearing, Chair Woodall took judicial notice of the EPA's technical report and
24 admitted it into the record as Hearing Exhibit C-2.

1 supported by the record. On those issues, the Unions' argue that the Commission should impose
2 LAER standards because of visibility and air quality issues.

3 In reality, La Paz will cause no visibility problems. Allegheny's air quality expert
4 (Herb Verville) rebutted the visibility issues raised by the Unions'. See 1/16/02 Tr., pp. 1530-
5 1547. Allegheny and Mr. Verville submitted modeling protocol to ADEQ and the Federal Land
6 Manager. Neither raised any visibility concerns. Also, Mr. Radis' opinions aren't based on
7 representative visibility data. Id. At hearing, Mr. Verville established that La Paz will not result
8 in any visibility impacts and the Siting Committee agreed. Id.

9 On the issue of LAER, there simply is no legal or factual basis to impose a LAER
10 condition for La Paz. The Project is located in an attainment area and is 50 miles outside the
11 Phoenix non-attainment area. By law, La Paz is governed by BACT standards--not LAER. Id.
12 at 1536-1537. Imposing LAER on La Paz would impose limits other than those required by
13 Arizona and federal law (through EPA and ADEQ). Id. During deliberations, the Committee
14 rejected a proposed LAER amendment 9-1. See 1/22/02 Tr., pp. 45. ADEQ designee Richard
15 Tobin's stated his reasons as follows:

16 I must respectfully oppose this particular amendment. I think it's very important that we
17 follow the law. This is something that my department cannot do. It will indeed cause
18 confusion in our process. And the benefit to be gained to the environment versus the
19 detriment overall is not a subject that I can support for this particular amendment. I
20 would note that the laws as they exist in the state are protective of human health and the
21 environment, and this is not necessary. Id. at 44-45.

22 Finally, the Unions' ammonia arguments are meritless. The Unions argue that use
23 of aqueous ammonia poses an unreasonable transportation and storage risk and urge the
24 Commission to impose a condition for an urea-ammonia generating system. That argument
should be rejected for four reasons. First, directly contrary to their position here, the Unions
argued for use of aqueous ammonia as a mitigation measure in comments on the Big Sandy

1 environmental impact statement. See 12/13/01 Tr., pp. 989-990.¹⁰ Second, aqueous ammonia
2 already is widely used and transported without problems in the Harquahala Valley for
3 agricultural purposes. Third, the record is undisputed that ADOT and USDOT standards and
4 regulations govern transportation of ammonia and Allegheny will comply with those applicable
5 rules and regulations. Fourth, the record also is undisputed that an urea system has not been used
6 for combined cycle plants and would be technically infeasible and cost prohibitive. See 1/16/02
7 Tr., pp. 1620-1626.

8 IV. CONCLUSION

9 Based on the record, the CEC serves the public interest by balancing the need for
10 adequate, economical and reliable electric power with minimal impacts on the environment. See
11 Ariz. Rev. Stat. § 40-360.07(B). The Commission should affirm the CEC.

12 GALLAGHER & KENNEDY, P.A.

13
14 By 

15 Michael M. Grant
16 Todd C. Wiley
2575 East Camelback Road
Phoenix, Arizona 85016-9225
17 Attorneys for Allegheny Energy Supply
Company, LLC
18

19 ¹⁰ The Unions submitted comments on the draft environmental impact statement for
20 the Big Sandy Energy Project. See August 6, 2001 Comments of Arizona Unions for Reliable
21 Energy. In comments authored by Dr. Fox, the Unions argued that a 20% aqueous ammonia
22 mixture should be used as a mitigation measure because "it is far less hazardous." Id. at p. 76.
23 Dr. Fox also offered the following statement in Big Sandy: "The National Response Center
(NRC) database also indicates that there are far fewer accidents involving aqueous ammonia. In
24 the last 9 years, only one aqueous ammonia accident occurred releasing only 10 gallons,
compared to 36 accidents involving anhydrous ammonia..." Id. at p. 77. For La Paz, Allegheny
intends to use 19% aqueous ammonia, which is exactly what the Unions urged for the Big Sandy
project.

1 ORIGINAL + 10 COPIES
2 filed with Docket Control
3 this 11th day of March, 2002.

4 COPIES of the foregoing
5 hand-delivered this 11th day
6 of March, 2002, to:

7 Chairman William A. Mundell
8 Arizona Corporation Commission
9 1200 West Washington
10 Phoenix, Arizona 85007

11 Commissioner Jim Irvin
12 Arizona Corporation Commission
13 1200 West Washington
14 Phoenix, Arizona 85007

15 Commissioner Marc Spitzer
16 Arizona Corporation Commission
17 1200 West Washington
18 Phoenix, Arizona 85007

19 COPIES of the foregoing mailed
20 this 11th day of March, 2002, to:

21 Laurie Woodall
22 Line Siting Committee Chair
23 Office of the Attorney General
24 1275 West Washington
Phoenix, Arizona 85007

Lyn Farmer, Esq.
Arizona Corporation Commission
1200 West Washington
Phoenix, Arizona 85007

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BEFORE THE ARIZONA CORPORATION COMMISSION

WILLIAM MUNDELL

CHAIRMAN

JIM IRVIN

COMMISSIONER

MARC SPITZER

COMMISSIONER

IN THE MATTER OF THE APPLICATION OF
ALLEGHENY ENERGY SUPPLY COMPANY, LLC
FOR A CERTIFICATE OF ENVIRONMENTAL
COMPATIBILITY FOR CONSTRUCTION OF A
1,080 MW (NOMINAL) GENERATING FACILITY
IN SECTION 35, TOWNSHIP 3 NORTH, RANGE
11 WEST IN LA PAZ COUNTY, ARIZONA AND
AN ASSOCIATED TRANSMISSION LINE AND
SWITCHYARDS BETWEEN AND IN SECTION 35,
TOWNSHIP 3 NORTH, RANGE 11 WEST AND
SECTIONS 23-26, TOWNSHIP 3 NORTH, RANGE
11 WEST ALSO IN LA PAZ COUNTY, ARIZONA.

DOCKET NO. L-00000AA-01-0116
CASE NO. 116

**APPENDICES TO
ALLEGHENY'S BRIEF**

Allegheny Energy Supply Company, LLC submits the following Appendices to

its brief filed March 11, 2002.

APPENDIX

DESCRIPTION

A

Arizona Power Plant Siting Committee Decision
and Order and approved Certificated of
Environmental Compatibility to Allegheny dated
January 30, 2002.

B

December 14, 2001 letter from John Kennedy,
Arizona Game and Fish Department (Siting
Committee Hearing Exhibit A-31).

C

October 22, 2001 letter from Matthew H.
Bilsbarrow, Arizona State Historic Preservation
Office (Siting Committee Hearing Exhibit A-8).

D

November 8, 2001 letter from Arizona State Senator
Herbert R. Guenther and Arizona House
Representatives James R. Carruthers and Robert
Cannell (Siting Committee Hearing Exhibit A-20).

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Economic and Fiscal Impact Report for Allegheny Energy's La Paz Generating Facility (Exhibit J-1 to CEC Application admitted as Siting Committee Hearing Exhibit A-5).

November 21, 2001 letter from Joseph C. Smith, Arizona Department of Water Resources (Siting Committee Hearing Exhibit A-21).

Slides presented by testimony of Donald L. Mundy (Siting Committee Hearing Exhibit A-28).

Technical Development Document for the Final Regulations Addressing Cooling Water Intake Structures for New Facilities (EPA-821-R-01-036) November 2001, Chapter 4, pages 1, 13-14 (Siting Committee Hearing Exhibit C-2).

ORIGINAL + 10 COPIES
filed with Docket Control
this 11th day of March, 2002.

COPIES of the foregoing
hand-delivered this 11th day
of March, 2002, to:

Chairman William A. Mundell
Arizona Corporation Commission
1200 West Washington
Phoenix, Arizona 85007

Commissioner Jim Irvin
Arizona Corporation Commission
1200 West Washington
Phoenix, Arizona 85007

Commissioner Marc Spitzer
Arizona Corporation Commission
1200 West Washington
Phoenix, Arizona 85007

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this 11th day of March, 2002, to:

2 Laurie Woodall
3 Line Siting Committee Chair
4 Office of the Attorney General
5 1275 West Washington
6 Phoenix, Arizona 85007

7 Lyn Farmer, Esq.
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10 Phoenix, Arizona 85007

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1000725
Beth Oakley

FEB 01 2002

BEFORE THE ARIZONA POWER PLANT AND TRANSMISSION LINE SITING COMMITTEE

GALLAGHER & KENNEDY

IN THE MATTER OF THE APPLICATION OF ALLEGHENY ENERGY SUPPLY COMPANY, LLC FOR A CERTIFICATE OF ENVIRONMENTAL COMPATIBILITY FOR CONSTRUCTION OF A 1,080 MW (NOMINAL) GENERATING FACILITY IN SECTION 35, TOWNSHIP 3 NORTH, RANGE 11 WEST IN LA PAZ COUNTY, ARIZONA AND AN ASSOCIATED TRANSMISSION LINE AND SWITCHYARDS BETWEEN AND IN SECTION 35, TOWNSHIP 3 NORTH, RANGE 11 WEST AND SECTIONS 23-26, TOWNSHIP 3 NORTH, RANGE 11 WEST ALSO IN LA PAZ COUNTY, ARIZONA.

DOCKET NO. L-00000AA-01-0116

CASE NO. 116

NOTICE OF FILING
DECISION AND ORDER

The Arizona Power Plant and Transmission Line Siting Committee hereby gives notice of filing its decision and order, approving the application of Allegheny Energy Supply Company, L.L.C., for a Certificate of Environmental Compatibility.

The Decision and Order are in the form attached hereto.

Dated this 30 day of January, 2002.ARIZONA POWER PLANT AND
TRANSMISSION LINE SITING
COMMITTEE

By: Laurie A Woodall
Laurie A. Woodall
Chairman

Pursuant to A.A.C. R14-3-204, the Original CEC and the original and twenty-five copies of this Notice were filed this 30 day of JAN., 2002, with:

Arizona Corporation Commission
Docket Control
1200 West Washington
Phoenix AZ 85007

1200-4
La Paz

1 COPIES of the foregoing Notice
2 mailed/hand-delivered/faxed this
30 day of JAN, 2002, to:

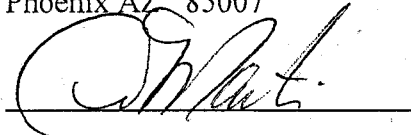
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25 Attorney for LA PAZ County

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27 Arizona Corporation Commission
28 1200 West Washington
Phoenix AZ 85007



220062.1

1 **BEFORE THE ARIZONA POWER PLANT AND TRANSMISSION**
2 **LINE SITING COMMITTEE**

3
4 IN THE MATTER OF THE APPLICATION OF
5 ALLEGHENY ENERGY SUPPLY COMPANY, LLC
6 FOR A CERTIFICATE OF ENVIRONMENTAL
7 COMPATIBILITY FOR CONSTRUCTION OF A
8 1,080 MW (NOMINAL) GENERATING FACILITY
9 IN SECTION 35, TOWNSHIP 3 NORTH, RANGE
10 11 WEST IN LA PAZ COUNTY, ARIZONA AND
11 AN ASSOCIATED TRANSMISSION LINE AND
12 SWITCHYARDS BETWEEN AND IN SECTION 35,
13 TOWNSHIP 3 NORTH, RANGE 11 WEST AND
14 SECTIONS 23-26, TOWNSHIP 3 NORTH, RANGE
15 11 WEST ALSO IN LA PAZ COUNTY, ARIZONA.

DOCKET NO. L-00000AA-01-0116
CASE NO. 116

16 **CERTIFICATE OF ENVIRONMENTAL COMPATIBILITY**

17 Pursuant to notice given as provided by law, the Arizona Power Plant and
18 Transmission Line Siting Committee (the "Committee") held public hearings in Parker and
19 Phoenix, Arizona, on September 4, 2001, November 13-14, 2001, December 13-14, 2001,
20 January 15-16, 2002 and January 22, 2002, in conformance with the requirements of Ariz. Rev.
21 Stat. (A.R.S.) § 40-360, *et. seq.*, for the purpose of receiving public comment and evidence and
22 deliberating on the application of Allegheny Energy Supply Company, LLC, or its assignees
23 ("Applicant"), for a Certificate of Environmental Compatibility ("Certificate") authorizing
24 construction of a 1080 MW (nominal) generating facility and an associated transmission line and
25 switchyards in La Paz County, Arizona (the "Project"), all as more particularly described and set
26 forth in the Application (the "Application").

27 The following members and designees of members of the Committee were present
28 on one or more of the hearing days:

Laurie Woodall

Richard W. Tobin II

Gregg Houtz

Ray Williamson

Chairman, Designee for Arizona
Attorney General, Janet Napolitano
Designee for Director, Arizona
Department of Environmental Quality
Designee for Director, Arizona
Department of Water Resources
Designee for Chairman,
Arizona Corporation Commission

1 Mark McWhirter

Designee for Director, Energy
Department, Arizona Department of
Commerce

2 Jeff McGuire

Appointed Member

3 Michael Palmer

Appointed Member

4 Wayne Smith

Appointed Member

5 Sandie Smith

Appointed Member

Margaret Trujillo

Appointed Member

6 Michael Whalen

Appointed Member

7 Applicant was represented by Michael M. Grant and Todd C. Wiley of
8 Gallagher & Kennedy, P.A. Arizona Corporation Commission Utilities Division Staff ("Staff")
9 was represented by Christopher C. Kempley and Jason D. Gellman. Intervenor Arizona Unions
10 for Reliable Energy ("Unions") was represented by James D. Viereggs of Morrison & Hecker,
11 L.L.P. and Mark R. Wolfe of Adams, Broadwell, Joseph & Cardozo. La Paz County, by its
12 County Attorney R. Glenn Buckelew, filed a notice of limited appearance in support of the grant
13 of Allegheny's Application.

14 At the conclusion of the hearing, after consideration of the Application, the
15 evidence and the exhibits presented, the comments of the public, the legal requirements of A.R.S.
16 §§ 40-360 to 40-360.13 and in accordance with A.A.C. R14-3-213, upon motion duly made and
17 seconded, the Committee voted 9-1 to grant Applicant the following Certificate of
18 Environmental Compatibility (Case No. 116):

19 Applicant and its assignees are granted a Certificate authorizing the construction
20 of a 1,080 MW (nominal) natural gas-fired, combined cycle electric generating plant, consisting
21 of two power blocks, each consisting of two combustion turbines, two heat recovery steam
22 generators, a steam turbine, condenser, transformers, and associated auxiliaries, and including
23 other necessary facilities such as cooling towers, tanks, sedimentation/evaporation ponds,
24 auxiliary boilers, an emergency generator, an emergency fire pump, and associated buildings.
25 Applicant and its assignees are hereby authorized to construct two switchyards, one for the plant
26 and one for the interconnection with the Palo-Verde Devers 500 KV transmission line.

27 Applicant

1 and its assignees are hereby granted authorization to construct an approximately 1.75 mile, 500
2 kV transmission line located not less than one-quarter (1/4) mile from the Avenue 75E ROW.

3 This Certificate is granted upon the following conditions:

- 4 1. Applicant and its assignees shall comply with all existing applicable air
5 and water pollution control standards and regulations, and with all existing
6 applicable ordinances, master plans and regulations of the state of Arizona,
the county of La Paz, the United States and any other governmental
entities having jurisdiction, including but not limited to the following:
 - 7 a. all zoning stipulations and conditions, including but not limited to
8 any landscaping and dust control requirements and/or approvals;
 - 9 b. all applicable air quality control standards, approvals, permit
10 conditions and requirements of the Arizona Department of
11 Environmental Quality ("ADEQ") and/or other State or Federal
12 agencies having jurisdiction, and the Applicant shall install and
13 operate selective catalytic reduction and catalytic oxidation
14 technology at the level determined by the ADEQ. The Applicant
15 shall operate the Project so as to meet a 2.5 ppm NOx emissions
16 level, within the parameters established in the Title V and PSD air
17 quality permits issued by ADEQ. Applicant shall install and
18 operate catalytic oxidation technology that will produce carbon
19 monoxide ("CO") and volatile organic compound ("VOC")
emission rates determined as current best available control
technology ("BACT") by ADEQ;
 - 20 c. all applicable water use and/or disposal requirements of the
21 Arizona Department of Water Resources ("ADWR"), and Section
22 6-503 of ADWR's Third Management Plan;
 - 23 d. all applicable ADEQ water use and discharge regulations; and
 - 24 e. all applicable regulations and permits governing transportation,
25 storage and handling of petroleum products and chemicals.
- 26 2. Applicant shall construct a 100 KW solar photovoltaic array for use in
27 conjunction with the Project's electricity use requirements. Applicant
28 shall also participate in future solar workshops conducted by the
Commission.
3. Subject to the availability of Central Arizona Project ("CAP") water and
delivery facilities, Applicant shall acquire or cause to be retired over the
next 30 years directly, through another or by contract with the Arizona
Water Banking Authority ("AWBA"), and/or through retirement of
irrigation eligible lands within the Harquahala INA, an aggregate amount
of 60,000 acre feet of water or that aggregate amount of water which may
be acquired or retired with \$6 million, whichever is less. However, at least
one-half of the obligation shall be expended, retired or acquired within the
first ten (10) years. The water acquired shall be recharged at any permitted

1 facility in the Harquahala INA. Water recharged shall be subject to annual
2 extinguishment by Applicant. If Applicant elects retirement of irrigation
3 eligible lands, one acre of retired rights is equivalent to five acre feet of
4 water annually. If Applicant has used or recharged CAP water in relation
5 to the Project's water needs, the amount of such use or recharge shall be
6 treated as a credit against Applicant's obligation under this condition.

- 7 4. Applicant's withdrawal and use of groundwater in the Harquahala
8 irrigation non-expansion area for electrical generation and related uses,
9 shall be consistent with and not exceed the amount outlined by the formula
10 in A.R.S. § 45-440(A). Applicant's lands eligible to be irrigated and
11 instead used for electrical generation and related uses, shall not be
12 irrigated with groundwater, but may be irrigated with the Central Arizona
13 Project water. Applicant shall comply with ADWR requests for additional
14 pumping information from operational pumping for electrical generation
15 and related uses, including but not limited to water level and water quality
16 data.
- 17 5. Prior to the commencement of groundwater withdrawals and in
18 consultation with the Arizona Department of Water Resources, Applicant
19 shall develop a monitoring program of monument inspection and
20 information gathering from agencies with infrastructure or jurisdiction
21 near the plant site concerning subsidence. The data gathered pursuant to
22 the monitoring program shall be regularly reported to the Department, the
23 Commission, El Paso Natural Gas, United States Geological Survey,
24 Central Arizona Project, Bureau of Land Management, State Land
25 Department and La Paz County.
- 26 6. In the year following the commencement of groundwater withdrawals in
27 relation to the Project, Applicant shall submit annual reports to the
28 Arizona Department of Water Resources pursuant to A.R.S. 45-437.C.1
reporting the quantity of groundwater withdrawn and the Notice(s) of
Authority appurtenant thereto.
7. Authorization to construct the facility will expire five years from the date
the Certificate is approved by the Arizona Corporation Commission unless
construction is completed to the point that the facility is capable of
operating at its rated capacity by that time; provided, however, that prior to
such expiration the facility owner may request that the Arizona
Corporation Commission extend this time limitation.
8. Applicant shall initially connect the 500 kV Plant Switchyard to the 500
kV Transmission Grid Interconnection Switchyard with a single 500 kV
transmission line, but shall allocate spaces in the Plant Switchyard and
shall direct SCE to allocate spaces in the Transmission Grid
Interconnection Switchyard for (i) a second 500 kV Transmission line
should future reliability studies indicate that such addition is necessary to
maintain reliability or (ii) a second Devers/Palo Verde transmission line.
9. Applicant's plant interconnection must satisfy the Western Systems
Coordinating Council's ("WSCC") single contingency outage criteria (N-
1) and all applicable local utility planning criteria without reliance on

remedial action such as, but not limited to, reducing generator output, reducing generator unit tripping or load shedding.

10. The Applicant's plant switchyard shall utilize a breaker and a half scheme.

11. Prior to construction of any facilities, Applicant shall provide to the Commission the system impact study and the facilities study performed by Southern California Edison regarding delivery of the full output of the Project to its intended markets (the "SCE Technical Studies"). The SCE Technical Studies shall be prepared in accordance with the rules and regulations governing such interconnections as established by the Transmission System Owner and Operator, in this case the Palo Verde-Devers Transmission Line owned by SCE and operated by CAISO. The SCE Technical Studies shall include a power flow and stability analysis report and shall identify transmission system upgrades or capacity improvements such that the Project will not compromise the reliable operation of the interconnected transmission system in accordance with SCE, CAISO and WSCC requirements. Applicant shall make all arrangements necessary with SCE and CAISO to implement the necessary transmission system upgrades or capacity improvements as documented in the final interconnection agreements. Applicant shall provide the Commission with copies of the transmission interconnection and transmission service agreement(s) it ultimately enters into with SCE or any transmission provider(s) with whom it is interconnecting, within 30 days of execution of such agreement(s). Prior to commencing commercial operation of the Project, transmission facilities improvements, as identified in the SCE Technical studies, shall have been completed.

12. Applicant anticipates that the transmission system upgrades or capacity improvements that will be identified and required in the SCE Technical Studies and the final interconnection agreement(s) will result in transmission capacity increases out of the Palo Verde Hub. However, in the event that these transmission capacity increases at the Palo Verde Hub are not equivalent to 1080 MW, pursuant to Federal Energy Regulatory Commission orders or regulations concerning interconnection and transmission service, Applicant shall work with the Commission Staff, Transmission Owners and power plant operators interconnected at the Palo Verde Hub to determine the best method for making additional necessary upgrades at the Palo Verde Hub to accommodate interconnected generation. Applicant shall contribute its share of the cost, as directed by FERC or governing RTO, if applicable, of such necessary upgrades. Applicant shall assure that such additional upgrades are completed before the Project commences commercial operation, or Applicant shall seek an extension of time from the Arizona Corporation Commission.

13. Applicant shall become and remain a member of WSCC, or its successor, and file an executed copy of its WSCC Reliability Management System (RMS) Generator Agreement with the Commission. Membership by an affiliate of Applicant satisfies this condition only if Applicant is bound by the affiliate's WSCC membership.

14. Applicant shall apply to become and, if accepted, thereafter remain a member of the Southwest Reserve Sharing Group or its successor, thereby making its units available for reserve sharing purposes, subject to competitive pricing.
15. Applicant shall offer for Ancillary Services, in order to comply with WSCC RMS requirements, a total of up to 10% of its total plant capacity to (A) the local Control Area with which it is interconnected and (B) Arizona's regional ancillary service market, (i) once a Regional Transmission Organization (RTO) is declared operational by FERC order, and (ii) until such time that an RTO is so declared, to a regional reserve sharing pool.
16. Within 30 days of the Commission decision authorizing construction of this project, Applicant shall erect and maintain at the site a sign of not less than 4 feet by 8 feet dimensions, advising:
 - a. That the site has been approved for the construction of a 1,080 MW (nominal) generating facility;
 - b. The expected date of completion of the facility; and
 - c. Phone number for public information regarding the project.

In the event that the Project requests an extension of the term of the certificate prior to completion of the construction, Applicant shall use reasonable means to directly notify all landowners and residents within a one-mile radius of the Project of the time and place of the proceeding in which the Commission shall consider such request for extension. Applicant shall also provide notice of such extension to La Paz County, Salome and Wenden.

17. Applicant shall first offer wholesale power purchase opportunities to credit-worthy Arizona load-serving entities and to credit-worthy marketers providing service to those Arizona load-serving entities.
18. Pursuant to applicable Federal Energy Regulatory Commission ("FERC") regulations, Applicant shall not knowingly withhold its capacity from the market for reasons other than a forced outage or pre-announced planned outage. Applicant shall not be required to operate its Project at a loss.
19. In connection with the construction of the project, Applicant shall give due consideration to use of qualified Arizona contractors. In addition, Applicant shall encourage the hiring of qualified local employees in connection with construction and operation of the Project.
20. Applicant shall continue to participate in good faith in state and regional transmission study forums to identify and encourage expedient implementation of transmission enhancements, including transmission cost participation as appropriate, to reliably deliver power from the Project throughout the WSCC grid in a reliable manner.

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21. Applicant shall participate in good faith in Arizona and regional workshops and other assessments of the interstate pipeline infrastructure and agrees to facilitate such workshops if the Duke II facility (Case No. 117) does not proceed with construction.
22. Applicant shall pursue all necessary steps to ensure a reliable supply and delivery of natural gas for the Project.
23. Within five days of Commission approval of this CEC, Applicant shall request in writing that El Paso Natural Gas Company ("El Paso") provide Applicant with a written report describing the operational integrity of El Paso's Southern System facilities from mileposts 628-670.39. Such request shall include:
- a. A request for information regarding inspection, replacement and/or repairs performed on this segment of El Paso's pipeline facilities since 1996 and those planned through 2006; and
- b. An assessment of subsidence impacts on the integrity of this segment of pipeline over its full cycle, together with any mitigation steps taken to date or planned in the future.

13 Applicant shall file its request and El Paso's response under this docket with the

14 Commission's Docket Control. Should El Paso not respond within thirty (30) days, Applicant shall

15 docket a copy of Applicant's request with an advisory of El Paso's failure to respond. In either event,

16 Applicant's responsibility hereunder shall terminate once it has filed El Paso's response or

17 Applicant's advisory of El Paso's failure to respond.

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24. Applicant shall operate the Project so that during normal operations the Project will not exceed (i) U.S. Department of Housing and Urban Development ("HUD") or Federal Transit Administration ("FTA") residential noise guidelines or (ii) Occupational Safety and Health Administration ("OSHA") Worker Safety Noise Standards.
25. Applicant shall use low profile structures and stacks, non-reflective and/or neutral colors on surface materials and low intensity directive/shielded lighting fixtures to the extent feasible for the Project. Applicant shall use monopoles for the associated 500 kv transmission line to the point of interconnection with the Devers-Palo Verde transmission line.
26. Applicant shall fence the generating facility and evaporation ponds to minimize effects of plant operations on terrestrial wildlife and shall keep the berms surrounding the evaporation ponds clear of vegetation to limit pond attractiveness to birds.
27. In consultation with the Arizona Game & Fish Department, Applicant shall develop a monitoring and reporting plan for the evaporation ponds.

1 The plan shall include the type and frequency of monitoring and reporting
2 to the Game & Fish Department and the U.S. Fish and Wildlife Service.
3 Should any issues arise as a result of the monitoring and reporting plan,
4 Applicant shall work with the United States Fish and Wildlife Service and
5 the Arizona Game and Fish Department to develop screening or other
6 methods to protect wildlife from harm at the Project's evaporation ponds.

- 7 28. Applicant shall continue cactus ferruginous pygmy owl surveys through
8 the Spring of 2002, based on established protocol. If survey results are
9 positive, the U.S. Fish and Wildlife Service and Arizona Department of
10 Game and Fish shall be contacted immediately for further consultation.
- 11 29. Applicant shall retain a qualified biologist to monitor all ground
12 clearing/disturbing construction activities. The biological monitor shall be
13 responsible for ensuring proper actions are taken if a special status species
14 is encountered (e.g., relocation of a Sonoran desert tortoise).
- 15 30. Applicant shall salvage mesquite, ironwood, saguaro and palo verde trees
16 removed during project construction activities and use the vegetation for
17 reclamation in or near its original location and/or landscaping around the
18 plant site.
- 19 31. Applicant shall retain an Arizona registered landscape architect to develop
20 a landscape plan for the perimeter of the generating facility. The
21 landscape plan will use native or other low water use plant materials.
22 Applicant shall continue to consult with La Paz County regarding the
23 landscape plan.
- 24 32. Applicant shall use a directional drilling process to bore under Centennial
25 Wash in constructing the gas pipeline to minimize potential impacts to the
26 mesquite bosque associated with the wash.
- 27 33. Applicant shall continue to consult with La Paz County in relation to its
28 comprehensive planning process to develop appropriate zoning and land
use classifications for the area surrounding the Project.
34. Applicant shall use its best efforts to avoid the two identified cultural
resource sites. If Sites AZ S:7:48 and 49 (ASM) cannot be avoided by
ground disturbing activities, the Applicant shall continue to consult with
the State Historic Preservation Office to resolve any negative impacts
which usually entails preparing and implementing a data recovery research
design and work plan.
35. If a federal agency determines that all or part of the Project represents a
federal undertaking subject to review under the National Historic
Preservation Act, Applicant shall participate as a consulting party in the
federal compliance process (i.e., 36 C.F.R. 800) to reach a finding of effect
and to resolve adverse effects, if any.
36. Should cultural features and/or deposits be encountered during ground
disturbing activities, Applicant shall comply with A.R.S. § 41-844, which
requires that work cease in the immediate area of the discovery and that

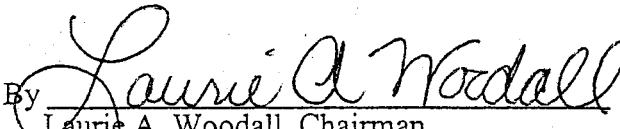
1 the Director of the Arizona State Museum be notified promptly.

- 2
- 3 37. If human remains or funerary objects are encountered during the course of
- 4 any ground disturbing activities related to the development of the subject
- 5 property, Applicant shall cease work and notify the Director of the Arizona
- 6 State Museum in accordance with A.R.S. § 41-865.
- 7 38 Applicant shall retain a qualified archaeologist to monitor ground
- 8 clearing/disturbing construction activities and to appropriately instruct
- 9 workers on detection and avoidance of cultural resource sites.
- 10 39. Applicant shall prepare a plan for shutdown, decommissioning and
- 11 cleanup of the plant site which shall be filed with the Commission's
- 12 Docket Control within one year of beginning construction. Applicant shall
- 13 work with La Paz County and any other local governing body with
- 14 jurisdiction over the plant site to ensure that such plan is reasonable, and is
- 15 followed or amended as necessary.
- 16 40. The Applicant, its successor(s) or assign(s) shall submit a self-certification
- 17 letter annually listing which conditions contained in the CEC have been
- 18 met. Each letter shall be submitted to the Utilities Division Director on
- 19 August 1, beginning in 2002, describing conditions which have been met
- 20 as of June 30. Attached to each certification letter shall be documentation
- 21 explaining, in detail, how compliance with each condition was achieved.
- 22 Copies of each letter, along with the corresponding documentation shall
- 23 also be submitted to the Arizona Attorney General and the Directors of the
- 24 Department of Water Resources and Department of Commerce Energy
- 25 Office.

26 GRANTED this 30th day of January, 2002.

27 ARIZONA POWER PLANT AND TRANSMISSION

28 LINE SITING COMMITTEE

By 
Laurie A. Woodall, Chairman

21 220038.1

1 APPROVED BY ORDER OF THE ARIZONA CORPORATION COMMISSION

2
3
4 _____
5 Commissioner

Commissioner

Commissioner

6
7 In Witness Hereof, I, Brian C. McNeil, Executive Secretary of the Arizona
8 Corporation Commission, set my hand and cause the official seal of this Commission to be
9 affixed, this ____ day of _____, 2002.

10 By _____

Brian C. McNeil
Executive Secretary

11
12
13
14 Dissent: _____

15
16 220038.1



THE STATE OF ARIZONA

GAME AND FISH DEPARTMENT

2221 WEST GREENWAY ROAD, PHOENIX, AZ 85023-4399
(602) 942-3000 • WWW.AZGFD.COM

GOVERNOR
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DIRECTOR
DUANE L. SHROUFE
DEPUTY DIRECTOR
STEVE K. FERRELL



A-31

December 14, 2001

RECEIVED
ATTY GEN'L'S OFFICE

Ms. Laurie A. Woodall, Chairman
Power Plant and Transmission Line Siting Committee
Office of the Attorney General
1275 West Washington
Phoenix, Arizona 85007

L-00000AA-01-0116

DEC 14 2001

RECEIVED
AZ CORP COMMISSION
DOCUMENT CONTROL

2001 DEC 18 P 3: 35

RECEIVED

Re: Allegheny Energy Supply Company- La Paz Generating Facility

Dear Ms. Woodall:

The purpose of this letter is to provide additional management recommendations to evaporative ponds associated with the La Paz Generating Facility and natural gas-fired generating facilities in Arizona.

At your request, the Arizona Game and Fish Department (Department) reviewed Dr. Terrill's testimony regarding an evaluation of potential impacts to wildlife resources as a result of power plants in Arizona. The Department stated in our letter, dated December 10, 2001, that we do not disagree with that review, and that we believe evaporative ponds have the potential to adversely impact wildlife resources. For that reason, we believe monitoring water quality and wildlife use should be an important aspect of avoiding potential adverse impacts to wildlife. Monitoring should be designed to identify potential impacts, and then develop appropriate contingency actions or long-term mitigation measures. Since migratory birds are protected under the Migratory Bird Treaty Act, the Department and U.S. Fish and Wildlife Service should be included in the design and implementation of monitoring, research and contingency plans. If monitoring identifies any potential negative impacts, we recommend that the following contingency plans be established to address these problems.

Avoidance

Preventing wildlife from utilizing the evaporation ponds could be accomplished through measures such as fencing, netting, enclosing, harassing, or removing the water.

Improving Conditions

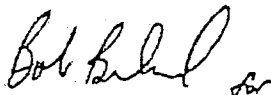
Improving water quality in the evaporation ponds can be accomplished through adding fresh water, removing toxins, or removing contaminated food sources (e.g., aquatic plants and brine shrimp)

The Department has been working with Allegheny Energy Supply Company to identify potential measures (fencing and vegetation control) that we believe will reduce wildlife use of the ponds.

Ms. Laurie A. Woodall
December 14, 2001December 14, 2001
2

In addition, the applicant has proposed to monitor water quality and wildlife use. The Department will continue to work with Allegheny Energy Supply Company to develop contingency plans that minimize potential adverse impacts to wildlife. Please contact me at (602) 789-3602 if you have any questions regarding this letter or the Department's involvement in this project.

Sincerely,



John Kennedy
Habitat Branch Chief

JK:BDB:bb

cc: Bob Broscheid, Project Evaluation Program Supervisor
Russ Engel, Habitat Program Manager, Region IV, Yuma

In reply, please refer to
SHPO-2001-2191 (7549)
adverse effect

October 22, 2001

Laurie A. Woodall, Chairperson, Power Plant and Transmission Line Siting Committee
Assistant Attorney General, Environmental Enforcement Section
Office of the Attorney General
1275 West Washington
Phoenix, Arizona 85007

Jane Dee Hull
Governor

RE: Certificate of Environmental Compatibility: The Proposed La Paz Generating Facility and Transmission Line, La Paz County, Arizona

State Parks
Board Members

Dear Ms. Woodall:

Chair
Walter D. Armer, Jr.
Benson

Thank you for having the committee's applicant (i.e., Allegheny Energy) continue to consult with this office regarding the above-mentioned state plan and associated certificate of environmental compatibility. The proposed construction plan includes a generation station, underground pipeline, transmission line, and a switchyard facility on private land and portions of Arizona State Land Department land. I have reviewed the documents submitted and offer the following comments pursuant to the State Historic Preservation Act (i.e., A.R.S. § 41-861 to 41-864) and the committee's factors to be considered (i.e., A.R.S. § 40-360.06.A.5).

Vice-Chair
Suzanne Pfister
Phoenix

Joseph H. Holmwood
Mesa

John U. Hays
Yarnell

As previously discussed, two historic properties were identified within the geographic area affected by the plan. Both are prehistoric archaeological sites (i.e., AZ S:7:48 and 49 ASM), and we agreed that they are eligible for inclusion in the State Register of Historic Places under Criterion D (Information Potential).

Elizabeth J. Stewart
Tempe

Vernon Roudebush
Safford

Based on the additional information submitted, a possibility exists that one or both of the archaeological sites and a suitable buffer zone may be avoided by and protected from plan-related ground-disturbing activities. If the avoidance option is implemented for both sites, a determination of no impacts (c.f., no adverse effect) would be warranted. If the avoidance option is not feasible or not chosen for one or both of the sites, then a finding of negative impacts (c.f., adverse effect) would be warranted; archaeological data recovery within the affected portion of the site or sites would be needed in this case.

Michael E. Anable
State Land
Commissioner

Kenneth E. Travous
Executive Director

We reiterate the conditions mention in our August 14, 2001 letter for the committee's consideration:

Arizona State Parks
1300 W. Washington
Phoenix, AZ 85007

Tel & TTY: 602.542.4174
www.pr.state.az.us

800.285.3703
om (520) area code

General Fax:
602.542.4180

Director's Office Fax:
602.542.4186

1) If Sites AZ S:7:48 and 49 (ASM) cannot be avoided by plan-related ground-disturbing activities, the applicant will continue to consult with this office, on the committee's behalf, to resolve the negative impacts. This usually entails preparing and implementing a data recovery research design and work plan.

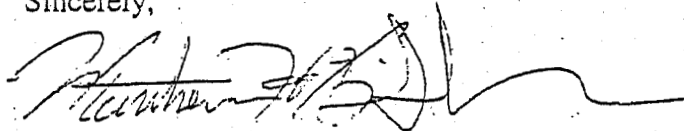
2) If a federal agency determines that all or part of this state plan represents a federal undertaking subject to review under the National Historic Preservation Act, the applicant will participate as a consulting party, on committee's behalf, in the federal compliance

process (i.e., 36 C.F.R. 800) to reach a finding of effect and to resolve adverse effects, if any.

3) Should cultural features and/or deposits be encountered during ground-disturbing activities related to the proposed plan, the applicant will comply with A.R.S. § 41-844, which requires that work cease in the immediate area of the discovery and that the Director of the Arizona State Museum be notified promptly.

Should this project proceed, we look forward to receiving from the applicant, a letter describing the proposed avoidance and protection measures or a data recovery work plan, as appropriate. We appreciate the committee's cooperation with this office in considering the effects of state plans on cultural resources situated in Arizona. If you have any questions or concerns, please contact me at (602) 542-7137 or electronically via mbilsbarrow@pr.state.az.us.

Sincerely,



Matthew H. Bilsbarrow, RPA
Compliance Specialist/ Archaeologist
State Historic Preservation Office

cc.

Gene Rogge, URS Corporation, 7720 North 16th St, Suite 100, Phoenix, AZ 85020



A-20

November 8, 2001

Ms. Laurie Woodall
Chairperson
Arizona Power Plant and Transmission Line Siting Committee
1275 West Washington Street
Phoenix, AZ 85007

Dear Ms. Woodall:

We wish to strongly support the application for a Certificate of Environmental Compatibility by the Allegheny Energy Supply Company for the proposed La Paz Generating Plant.

Input from the citizens of La Paz County has been uniformly positive, in favor of the facility. Various members of our district have pointed out the positive financial impact of the facility on the economy of La Paz County, and have voiced no concerns regarding environmental issues. Some of them have studied the plans for the plant carefully, to assure themselves that the plant is being constructed with the environment in mind. We have heard positive support throughout La Paz County, particularly from the communities of Bouse, Salome and Wenden.

The La Paz Generating Plant will:

- * Double the tax base of La Paz County
- * Serve the future needs for power in Arizona
- * Support the Palo Verde Nuclear Generating Facility by improving the transport capability of the existing Palo Verde-Devers 500 kV transmission line, providing voltage support between the facility and Palm Springs, California

The La Paz Generating Plant will also provide needed jobs in La Paz County, while having the potential to replace some of the smaller, less efficient, less environmentally friendly older units in the area.

We unanimously support this facility as an environmentally friendly way to enhance power production in Arizona and strengthen the economy in District 5.

Sincerely,

Herbert Guenther
CKL

Herbert R. Guenther
Arizona State Senator

Sincerely,

James Carruthers
CKL

James R. Carruthers, Ph.D.
Arizona House of Representatives

Sincerely

Robert Cannell, M.D.
CKL

Robert Cannell, M.D.
Arizona House of Representatives

Cc: Jacqueline R. Norton, Gallagher & Kennedy

**ECONOMIC AND FISCAL IMPACT
OF ALLEGHENY ENERGY'S
LA PAZ GENERATING FACILITY**

June 2001

Prepared by
Center for Business Research
L. William Seidman Research Institute
College of Business
Arizona State University
Tempe, AZ 85287-4011

ECONOMIC AND FISCAL IMPACT OF ALLEGHENY ENERGY'S LA PAZ GENERATING FACILITY

SUMMARY

Allegheny Energy has proposed to build a \$450 million electric generating facility to be located in La Paz County, about 70 miles west of Phoenix, Arizona. The plant will have a capacity of 1,080 megawatts and will generate some 8,500 gigawatt hours of electricity per year, enough to meet the energy needs of 600,000 Southwest households.

On-site construction is scheduled to begin in mid 2002 and will last for approximately 30 months. During this time, plant construction will have an annualized direct impact on spending in the state of Arizona of \$48 million and an indirect impact of \$38 million. This spending will serve to create 860 in-state jobs and earnings paid to Arizona households of some \$31 million. Approximately one-half of these impacts will be felt in La Paz County.

Plant construction will provide significant tax revenues for Arizona's state and local governments. Construction sales taxes will total \$2.6 million over the entire period of construction. Indirect income, sales, and property taxes on Arizona households and businesses will total \$2.9 million.

Electric generation is a highly capital-intensive activity, so the direct impact of plant operations on Arizona employment and earnings will be relatively modest. The plant will employ 40 people on a full-time basis, with an annual payroll of \$3 million. However, an additional 760 jobs and \$28 million in earnings will be generated indirectly through the purchases of materials and services for plant operations, purchases of goods and services by plant employees and, most importantly, the spending of tax revenues collected by state and local governments. About 20 percent of the total new earnings in the state will be associated with jobs located in La Paz County.

The fiscal impact of plant operations will be substantial. The plant will be gas-fired and will use approximately \$200 million worth of natural gas each year. These fuel purchases will be subject to the state's sales tax and will yield \$10.1 million in tax revenues each year. Income from plant operations will be subject to the state corporate income tax. Income tax revenues are estimated to be \$3.7 million per year. The plant also will contribute \$2.7 million per year in property tax revenues. Finally, indirect income, sales, and property taxes raised through the multiplier process will add another \$1 million to revenues. Total (direct and indirect) state and local tax revenues associated with plant operations will be \$17.5 million per year.

ECONOMIC AND DEMOGRAPHIC PROFILE OF LA PAZ COUNTY

The La Paz Generating Facility will be located near I-10, just west of the La Paz-Maricopa County line and approximately 75 miles west of Phoenix. La Paz is a sparsely populated county with some 20,000 residents and a land area of 4,500 square miles (see Table J-1.1 for selected economic and demographic statistics). According to the latest census, the county population grew rapidly over the past 10 years. The La Paz population increased 42 percent from 1990-2000, about the same rate as the state as a whole.

TABLE J-1.1
ECONOMIC AND DEMOGRAPHIC CHARACTERISTICS OF LA PAZ COUNTY

	La Paz County	State of Arizona
Population, 2000	19,715	5,130,632
Percent change in population, 1990-2000	42.4	40.0
Persons per square mile	4.4	45.2
Personal income per capita, 1999	\$22,100	\$25,200
Earnings (by place of work) per capita	\$10,900	\$16,700
Adjustment for residence	\$2,700	\$100
Dividends, interest, and rent per capita	\$3,200	\$5,000
Transfer payments per capita	\$5,300	\$3,400

Source: Center for Business Research, L. William Seidman Research Institute, College of Business, Arizona State University, using data from the U.S. Bureau of the Census and the Bureau of Economic Analysis

Per capita income in La Paz County was \$22,100 in 1999, 88 percent of Arizona per capita income. Per capita earnings, calculated by dividing earnings from jobs located in the county by the resident population, were only 65 percent of Arizona per capita earnings. Since many residents work outside the county, however, mean earnings by place of residence were somewhat higher, about \$13,600 per resident, or 81 percent of mean earnings in the state. Also boosting per capita income in the county was the fact that residents received \$5,300 per person in government transfer payments, \$1,900 more than the statewide average. However, La Paz residents received \$1,800 less per person in dividends, interest, and other capital income.

Table J-1.2 compares the industry composition of employment in La Paz County with that in the United States. The location quotients shown in column (4) of the table help to identify industries that form the economic base of the La Paz economy. Location quotients are calculated as the ratio of an industry's employment share in the local economy to its share nationwide. A location quotient greater than 1 indicates that local businesses are likely to receive a significant share of their income from residents outside the county.

The economic base of La Paz County derives from two primary activities — tourism and agriculture. Water recreational activities are available along a 17-mile strip in the Parker area. The town of Quartzite is known for its winter season gem and mineral shows. Substantial out-of-county income is also derived from those who pass through the county along I-10 and stop for food and gas.

The relative significance of tourism to the county is apparent from the employment figures in Table J-1.2. Amusement and recreation services account for 5.5 percent of total employment in the county, compared with only 1.0 percent in the nation. Auto dealers and service stations comprise 10.1 percent of La Paz County employment, but only 1.6 percent of U.S. employment. La Paz also has an above-average share of employment in eating and drinking establishments and in hotels and lodging places.

Agriculture is also an important export-base industry in La Paz County. Agriculture accounts for 13.8 percent of La Paz County employment, almost 5 times the national share. Particularly important to the county are agricultural services and businesses involved in the growing of hay and vegetables.

**TABLE J-1.2
EMPLOYMENT BY INDUSTRY: LA PAZ COUNTY VS. UNITED STATES, 1998**

	LA PAZ COUNTY		UNITED STATES	Location Quotient
	Number of Employees (1)	Percent of Total (2)	Percent of Total (3)	Ratio of (2) to (3) (4)
Total	7,463	100.00	100.00	1.0
Agriculture	1,030	13.80	2.94	4.7
Hay and pasture	259	3.47	0.45	7.7
Vegetables	120	1.61	0.08	19.6
Agricultural services	533	7.14	0.42	16.9
Mining	7	0.09	0.43	0.2
Construction	366	4.91	6.57	0.7
Manufacturing	381	5.10	12.07	0.4
Transportation and public utilities	285	3.82	4.45	0.9
Wholesale and retail trade	1,963	26.30	20.89	1.3
Automotive dealers and service stations	755	10.11	1.62	6.2
Eating & drinking	492	6.60	5.19	1.3
Finance, insurance, and real estate	369	4.95	7.16	0.7
Services	1,821	24.40	30.54	0.8
Hotels and lodging places	231	3.09	1.24	2.5
Amusement and recreation services	413	5.53	0.97	5.7
Government	1,241	16.63	14.95	1.1

Source: Center for Business Research, L. William Seidman Research Institute, College of Business, Arizona State University, using 1998 IMPLAN employment data files, Minnesota IMPLAN Group.

ECONOMIC IMPACT OF LA PAZ GENERATING FACILITY

Estimates of the economic impact of the proposed generation plant were made using an Arizona-specific version of IMPLAN, an input-output model used widely by researchers throughout the United States. The input-output model provides estimates of the direct and indirect impacts of plant construction and plant operations on spending, employment and earnings in the local economy. Direct impacts refer to construction- or operations-related purchases of materials and services from local suppliers and to jobs directly connected to construction or plant operations. These direct impacts then induce indirect or multiplier effects when local suppliers place upstream demands on other producers, when employees spend their incomes in the community, and when state and local governments spend new tax revenues. The size of these multiplier effects depends on the percentage of purchases that falls on goods and services produced inside the local economy. The higher is the share of local production, and the smaller the propensity to import, the larger are the multiplier effects.

Economic impact assessments were made for two study areas—La Paz County and the state of Arizona. In estimating county-level impacts, the state model was modified to reflect the specific industrial structure of La Paz County. Because La Paz has such a narrow industrial base, the multiplier effects associated with spending and employment in the county tend to be small.

Construction-related Impacts

Table J-1.3 provides estimates of the economic impacts arising from construction of the Allegheny plant. Construction phase impacts are short-term effects related to construction employment and industries that support construction. On-site construction is scheduled for a 30-month period beginning in mid 2002 and ending late in 2004. This is the general time period during which the construction impacts will be felt.

TABLE J-1.3 ECONOMIC IMPACT OF LA PAZ GENERATING FACILITY: CONSTRUCTION*		
	La Paz County	State of Arizona
Spending (in millions of 2001 dollars)		
Direct	32.2	48.0
Indirect	6.3	37.9
Total	38.5	85.9
Employment (full-time equivalent jobs)		
Direct	300	365
Indirect	99	491
Total	399	856
Earnings (in millions of 2001 dollars)		
Direct	12.4	15.4
Indirect	2.4	15.9
Total	14.8	31.3

*Construction figures are at annualized rates. Construction-related impacts are temporary, corresponding to a projected 30-month construction period beginning in mid 2002.

Source: Center for Business Research, L. William Seidman Research Institute, College of Business, Arizona State University using data provided by Allegheny Energy and IMPLAN 2.0

The estimated cost of the plant is \$450 million. The value of local construction costs, together with in-state purchases of equipment and materials, is estimated at \$120 million, or \$48 million on an annualized basis. Plant construction will directly create 365 jobs in the state. These workers will earn an average of \$42,000, so the project will generate direct local earnings of \$15 million per year during the construction period.

The indirect impacts from plant construction occur partly through interindustry relationships within the Arizona economy. Each \$1 of construction spending in the state induces \$0.35 of additional spending when suppliers purchase goods and services from other Arizona businesses. Most of these induced effects are concentrated in wholesale trade, professional services and other business services. Another way in which plant construction indirectly affects the state economy is when the workers involved, those employed directly and those working for suppliers, spend some of their earnings on locally-produced goods and services. Each \$1 of construction spending is estimated to induce an additional \$0.44 worth of spending because of the consumer spending of involved workers. The industries affected by this spending are largely retail trade and consumer service industries. Accounting for all induced effects, plant construction is estimated to have an indirect impact on Arizona spending of \$38 million per year. This spending will generate an additional 490 jobs and \$16 million worth of earnings in the state economy.

Construction of the La Paz facility will have a total (direct plus indirect) annualized impact of \$86 million on spending in the state of Arizona. This spending will generate a total of 860 in-state jobs and earnings equal to \$31 million per year.

To estimate the economic impact of plant construction on La Paz County, it was assumed that (i) use of county suppliers during the plant's construction would follow the patterns typical of new utility construction in the county (relationships already captured in the IMPLAN model); (ii) one-quarter of the on-site construction crew would live in La Paz County; and (iii) none of the specialized mechanical or electrical equipment would be purchased from suppliers in the county. Under these assumptions, direct spending in the county will equal \$32 million at an annualized rate. Indirect spending associated with interindustry purchases and local spending by the construction crew will equal \$6 million per year. Thus the total spending impact on the county is estimated to be \$39 million per year. Average on-site construction employment is

expected to be around 300 workers. An additional 100 jobs may be generated through the multiplier process. The total employment impact on the county is then 400 jobs. Direct earnings associated with construction are estimated at \$12 million, and an additional \$2 million will arise through the multiplier process. The total impact of construction on La Paz county earnings is \$15 million per year.

Operations-related Impacts

Electric generation is a highly capital-intensive activity. The value of fixed assets per worker in the nation's electric and gas utilities is \$1.3 million. This is 13 times the capital per worker used on average across all U.S. industries. Because of these high capital requirements, electric generation yields significant revenues for state and local governments through property taxes and corporate income taxes. The impacts of plant operations on local employment and earnings, however, are relatively small. Table J-1.4 shows our estimates of the economic impacts arising from operations at the Allegheny plant.

TABLE J-1.4 ECONOMIC IMPACT OF LA PAZ GENERATING FACILITY: OPERATIONS		
	La Paz County	State of Arizona
Spending (in millions of 2001 dollars)		
Direct	25.4	25.4
Indirect	2.1	43.9
Total	27.5	69.3
Employment (full-time equivalent jobs)		
Direct	40	40
Indirect	33	763
Total	73	803
Earnings (in millions of 2001 dollars)		
Direct	3.0	3.0
Indirect	3.5	27.5
Total	6.5	30.5

Source: Center for Business Research, L. William Seidman Research Institute, College of Business, Arizona State University using data provided by Allegheny Energy and IMPLAN 2.0

Commercial operations at the plant are scheduled to begin in December 2004. There will be approximately 40 full-time positions at the plant. Average pay, including salary and benefits, will be \$75,000 per worker, with a total payroll of \$3 million per year. In addition to the payroll expenses, the plant will spend \$22 million per year on locally produced materials and services, including maintenance contracts, chemicals, and consumables.

Through the multiplier process, direct spending of \$25 million generates indirect spending in the state economy of \$44 million. Each \$1 of direct spending on plant operations gives rise to \$0.54 of spending by state and local governments, expenditures financed from sales and income taxes on Allegheny operations. For every \$1 of direct spending, \$0.37 also is spent when suppliers purchase goods and services from other Arizona businesses. Finally, another round of economic impacts is triggered when all of the workers involved, both directly and indirectly, spend a portion of their incomes in the state economy. Each \$1 of direct spending on Allegheny operations is estimated to induce an additional \$.82 worth of spending because of the consumer spending of involved workers. Accounting for all induced effects, plant operations have an indirect impact on spending in Arizona of \$44 million per year. This spending, in turn, will generate 760 jobs and \$28 million worth of earnings. The total (direct plus indirect)

impacts of plant operations are \$69 million in spending, 800 full-time equivalent jobs and \$31 million in earnings per year.

To estimate the impact of plant operations on the La Paz County economy, we assumed that (i) three-quarters of the full-time personnel would choose to live in La Paz; (ii) the county would receive none of the interindustry effects associated with plant purchases of materials and services; and (iii) the county would use Allegheny property tax revenues to reduce property tax rates (see next section). Under these assumptions, multiplier effects add an additional \$2.1 million of spending to the La Paz economy and support an additional 33 jobs and \$3.5 million of after-tax earnings. The total impacts of plant operations on the La Paz economy are \$27.5 million in spending, 73 jobs, and \$6.5 million in earnings per year.

FISCAL IMPACT OF LA PAZ GENERATING FACILITY

The La Paz plant will generate substantial tax revenues for Arizona. Annual fuel consumption of 45 million MMBtu of natural gas will be subject to sales/use taxes. Also, because the plant is so highly capital intensive, it will generate state income and local property tax revenues far out of proportion to its employment. For the average Arizona business, tax collections from sales, property, and income taxes amount to about \$1,500 per worker. Taxes associated with the operations of Allegheny's La Paz facility are on the order of \$400,000 per worker. A summary of the plant's fiscal impacts is provided in Table J-1.5.

TABLE J-1.5 FISCAL IMPACT OF LA PAZ GENERATING FACILITY (IN MILLIONS OF 2001 DOLLARS)	
Type of Tax	Tax Revenue
Construction-related impacts*	
Construction sales tax	1.0
Indirect taxes on AZ households	0.9
Indirect taxes on AZ businesses	0.3
Total state & local taxes	2.2
Operations-related impacts	
Allegheny fuel use taxes	10.1
Allegheny corporate income taxes	3.7
Allegheny property taxes**	2.7
Indirect taxes on AZ households	0.7
Indirect taxes on AZ businesses	0.3
Total state & local taxes	17.5

*Construction figures are at annualized rates. Construction-related impacts are temporary, corresponding to a projected 30-month construction period beginning mid 2002.

**Estimate for tax year 2007, the first year in which full commercial operations are recognized.

Source: Center for Business Research, L. William Seidman Research Institute, College of Business, Arizona State University using IMPLAN 2.0 and data from Allegheny Energy, B&G Property Tax Associates, and the Utah State Tax Commission.

Construction Sales Tax

The state levies a sales tax on materials used in plant construction. The tax is calculated assuming that 65 percent of construction cost is related to materials, with the remaining 35 percent assumed to be labor costs. The sales tax is applied only to the materials portion of the project. Taxable materials are estimated to be \$52 million. Sales tax revenues relating to construction then amount to \$2.6 million, or \$1.0 million at an annualized rate.

Fuel Use Tax

Natural gas consumption is taxed by the state at a rate of 5 percent of value. Allegheny projects that the plant will use on average 45 million MMBtu of gas per year over the 30-year life of the plant. Gas prices are currently in a neighborhood of \$5 per MMBtu but are not expected to remain that high. In our tax estimates, we use a figure of \$4.50 per MMBtu for average gas prices. This implies fuel consumption of \$200 million per year and state tax revenues of \$10.1 million per year. Revenues will fluctuate with gas prices. A deviation from mean of +/- \$2 per MMBtu in gas prices implies a deviation of +/- \$4.5 million in fuel tax revenues.

Corporate Income Tax

Given the size of the capital investment, it is expected that the Allegheny plant will generate significant tax revenues for the state through the corporate income tax. Allegheny has estimated that its state income tax payments will average \$3.7 million per year.

Property Tax

Allegheny Energy assets located within Arizona will be subject to county and local school district property taxes. The plant will reside in an area inside the Wenden school district of La Paz County. Under state law, electric generation assets are assessed for tax purposes at 25 percent of their cash value.

Estimates of Allegheny's property taxes were prepared by B&G Property Tax Associates. Because Allegheny's assets are large relative to the La Paz tax base, B&G tried to allow for the impact of Allegheny on property tax rates within the county. In one scenario — the one used in our economic impact analysis — B&G held total tax revenues constant at their values in 2000 and assumed that new taxes from Allegheny would reduce the taxes of existing property owners dollar for dollar. The first tax year in which full commercial operations at the plant are recognized is 2007. Using the assessed values of Allegheny's assets in that year and the total assessed values in the county in tax year 2000, B&G estimated that Allegheny's property tax liability in 2007 would be \$2.7 million. By assumption, almost all of this revenue is used to reduce taxes for existing property owners. The average primary tax rate for existing owners falls from \$6.2306 per \$100 of assessed value to \$4.2402, and the average secondary rate decreases from \$0.6953 to \$0.4452.

Under current statutes, an infusion of taxable assets the size of Allegheny's will trigger a significant increase in the qualifying tax that Arizona uses to help equalize educational expenditures across the state. It is impossible to estimate the size of this rate with any degree of accuracy. However, using simplifying assumptions to make the analysis manageable, B&G estimated that the Allegheny plant could raise the qualifying rate by as much as \$2 per \$100 of assessed value. With the addition of this tax, Allegheny's property tax liability in 2007 would be \$3.5 million rather than \$2.7 million. The qualifying tax also would be applied to other property owners in the county. This would reduce the amount of tax relief realized by La Paz residents and would redirect some of the new tax monies from the county to the state.

In its analysis, B&G assumed that Allegheny would use accelerated depreciation methods when valuing equipment for tax purposes, as required by state law. An implication of this assumption is that the assessed value of Allegheny's property rises from \$42 million in 2007 to \$71 million in 2010 (due to the recapture of depreciation) before falling. Allegheny's property tax liabilities, therefore, will follow a similar temporal pattern.

Indirect Taxes

Indirect tax revenues will be generated in the state through the multiplier process. Estimates of these effects were made by combining IMPLAN estimates of the indirect earnings/value-added associated with plant construction and operations with estimates of the burden of Arizona's state and local taxes on households and businesses. For each \$1,000 of income, households pay \$20 in income taxes, \$36 in general sales and excise taxes, and \$14 in property taxes. For each \$1,000 of value-added, businesses pay \$4 in income taxes, \$14 in sales taxes, and \$11 in property taxes. Using these figures, we estimate that there will be an additional \$1.1 million of indirect taxes collected because of plant construction and \$1.0 million of indirect taxes related to plant operations.

Summary of Fiscal Impacts

The total of all construction-related revenue impacts over the entire construction period is \$5.5 million. Taxes on construction materials account for 47 percent of this total. The remaining revenues come from income, sales, and property taxes collected from households and businesses involved through the multiplier process.

Tax collections associated with plant operations will be \$17.5 million per year. Of this total, taxes on fuel consumption account for 58 percent, corporate income taxes for 21 percent, and taxes on Allegheny property for 15 percent.

CONCLUSION

The direct impact of Allegheny operations on jobs and incomes in Arizona will be modest — employment of 40 workers and earnings of some \$3 million per year. However, the plant will use a large amount of natural gas that is taxable under the state's sales tax. Also, because the plant is so highly capital intensive, it will generate state income and local property tax revenues far out of proportion to its employment. For the average Arizona business, tax collections from sales, property, and income taxes amount to about \$1,500 per worker. Taxes associated with the operations of Allegheny's La Paz facility are on the order of \$400,000 per worker. When these tax monies are spent by governments, or used to reduce existing taxes and then spent by households, a significant number of new jobs are indirectly created. It is estimated that each job at the Allegheny plant will induce an additional 19 jobs somewhere in the state. All totaled, operations at the La Paz facility will generate 800 new jobs and earnings of \$31 million for the state of Arizona.

REFERENCES

Allegheny Energy. Estimates of construction costs, including percentage of equipment and materials to be purchased from out-of-state suppliers. Projected operational expenses, including payroll, materials and services, and fuel. Estimates of state of Arizona corporate income tax payments.

Arizona Department of Revenue, *2000 Annual Report*.

B&G Property Tax Associates. Estimates of La Paz County property taxes on the Allegheny plant.

IMPLAN Professional, Version 2.0. Used to estimate indirect (or multiplier) effects of spending events.
Construction impacts assessed using IMPLAN Sector #50 ("New Utility Structures").
Operational impacts assessed using IMPLAN Sector #511 ("State and Local Utilities").

Utah State Tax Commission, Economic and Statistical Unit, *Business and Household Initial State and Local Tax Burdens, FY 1999-2000.*

RECEIVED

ARIZONA DEPARTMENT OF WATER RESOURCES

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AZ CORP COMMISSION
DOCUMENT CONTROL

November 21, 2001



JANE DEE HULL
Governor

JOSEPH C. SMITH
Director

Ms. Laurie Woodall
Chairman, Siting Committee
Office of the Attorney General
1275 West Washington
Phoenix, Arizona 85007

Re: Allegheny's Application for CEC, Docket #116 L-000000AA-01-0116

Dear Madam Chairman:

During the Hearing on November 14, 2001, you requested, on behalf of the Siting Committee, as to whether the Arizona Department of Water Resources (Department) has available staff and is willing to commit such staff to work on three issues with the applicant in Docket #116. The Department does not believe that this is necessary. Each issue is discussed below.

Issue #1 - Should the Applicant be required to work with the Department to perform an aquifer pump test near the site of the proposed wellfield to prove the accuracy of the model provided by Vidler Recharge? Intervenor AZURE and Committee Member Williamson proposed this question.

As stated in the November 9, 2001 Preliminary Hydrologic Review prepared by Dale Mason, Modeling Section Manager, Arizona Department of Water Resources, the Department stands by its position that the model used in this case is valid. "The numerical model was reviewed by the ADWR staff in 1999 and found to reasonably simulate the response of the regional aquifer to historic pumping stresses from 1950 to the present." (Page 3). Despite testimony of AZURE's expert witness, a well formulated and calibrated model is a good tool for predicting the behavior of particular pumping patterns or recharge activity.

Should Committee Member Williamson or any other Member of the Committee wish, the Department would be willing to conduct a generic briefing for the Committee on modeling parameters. The particulars would be from a different part of the State but would demonstrate modeling technology. The Department models many areas of the State, and is considered by most State agencies to be an expert in hydrology and modeling. I would hope that Committee Members would give deference to the Department in these matters.

Ms. Laurie Woodall
November 21, 2001
Page Two

Issue #2. Should subsidence monitoring be required in the area of the proposed plant and well-field? Several Committee Members and Intervenor AZURE suggested this. In the November 9, 2001 memo from Dale Mason, the Department suggested that additional subsidence investigations be performed. Applicant testified that it performed an investigation and concluded that subsidence does not exist today in the area of the proposed plant and wellfield.

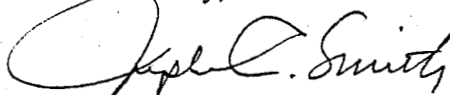
We are satisfied with the investigation performed by the Applicant, however, as suggested to the Applicant at the hearing, the Department believes that a continuing monitoring program should be put in place. The Department believes this could be as simple as requiring a periodic check (i.e. five-years) of monuments and discussions with agencies with infrastructure or jurisdiction near the plant site, such as the Central Arizona Project, the Bureau of Land Management and State Lands. This information could then be conveyed to the Department and the Commission for review. Should the Applicant not prepare a condition to monitor for subsidence, the Department will be prepared to offer a condition to effect such a monitoring program.

Issue #3. Should the Applicant be required to provide mitigation for any damage that may be caused by groundwater pumping over the life of the plant? Committee Member Palmer and I suggested this, along with Intervenor AZURE.

While the Department will not commit staff to negotiate with the Applicant at this time for an agreed upon mitigation plan, the Department may be prepared at the next hearing to propose a condition for mitigation recharge. Of course, if the Applicant proposes mitigation recharge during its rebuttal case, this may not be necessary.

When the transcript is available we will review for further insight into the discussion on these issues and any other issues, which the Committee wishes to be discussed between the Department and the Applicant.

Sincerely,

A handwritten signature in cursive script, appearing to read "Joseph C. Smith".

Joseph C. Smith
Director

JCS:kd

A-28

La Paz Generating Facility

Application for a Certificate of Environmental Compatibility

**January 15 and 16, 2002
Exhibit A-28**

La Paz Generating Facility

Application for a Certificate of Environmental Compatibility

**Testimony of
Donald L. Mundy**

Unique Power System Benefits to Arizona from the Project

- Commitment of up to \$25 million in transmission upgrades to the Arizona Transmission Grid
- Commitment of an additional \$2.5 million and proportional sharing of additional upgrade costs at the Palo Verde Hub.
- Increased merchant power supply
- Commitment to reserve sharing
- Commitment of up to 10% of the plant for ancillary services
- Increased Palo Verde - Devers transmission reliability with new Project interconnection switchyard
- Provision for development of new local power grid near the Project
- Provision for future interconnection and expansion of other regional transmission lines to the Project

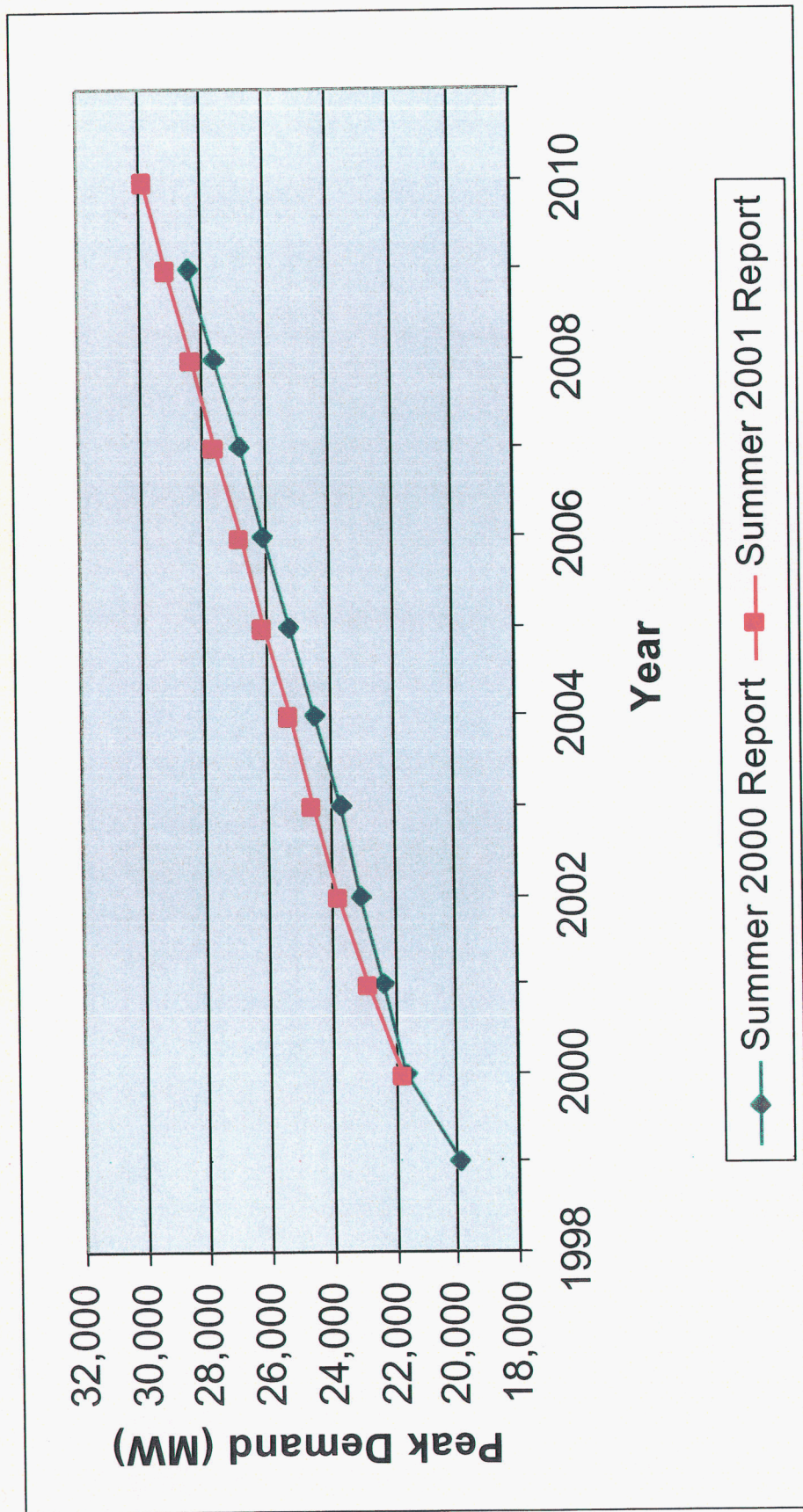
Plant Retirement Opportunities in Arizona as a Result of the Allegheny Project

- In 2004/5 (planned commercial operation of the Project) about 6,000 MW of the Arizona generating plants will be over 30 years old.
- The natural gas fuel consumption necessary to produce electric energy in a typical Arizona generating plant constructed in the 1960s and 1970s is from 50% to 100% greater than the fuel consumption of the Allegheny Project. In other words, the Allegheny Project is much more fuel efficient than the older facilities, which translates into lower costs to the consumer.
- The Allegheny Project will use technologies and control systems that will produce much lower emissions than units constructed 20 plus years ago.
- The Allegheny Project together with other similar plants under construction (about 5,700 MW) will allow Arizona to keep up with forecast load growth and reserve margin needs and also retire 30 plus-year-old, less efficient and less environmentally friendly units, thus broadly improving the power supply situation.

Updated Regional Power System Forecasts

- New WSCC data (10-Year Coordinated Plan Summary 2001 - 2010) dated August 2001, was officially adopted by NERC on October 16, 2001 and released on October 26, 2001.
- Relevant data are based on the Arizona, New Mexico and Southern Nevada Region.
- Arizona represents about 65% of the region on a MW load basis.
- New load growth forecasts indicate higher values. In 2005 the new predicted growth in the region is 829 MW higher than the previous forecast.
- New regional reserve margins have shifted to generally lower values in the period. In 2005 the forecast margin is 24% less than was previously forecast.
- The following graphs indicate the regional values in comparative form.

AZ/NM/SNV Regional Load Forecast Comparison

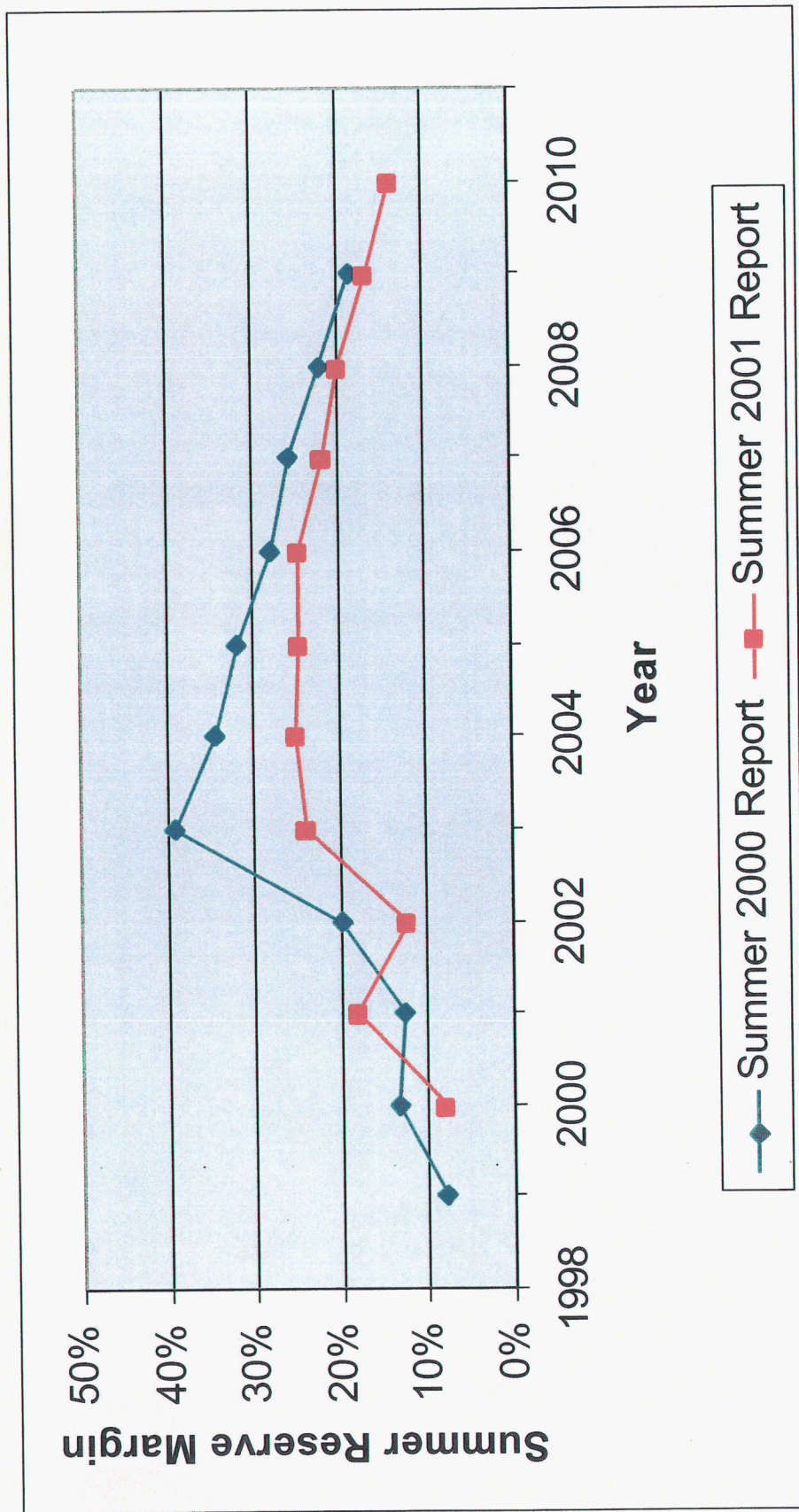


WSSC 10 - Year Coordinated Plan Summary 2001-2010, August 2001 and 2000-2009, October 2000



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AZ/NM/SNV Regional Load Reserve Margin Comparison

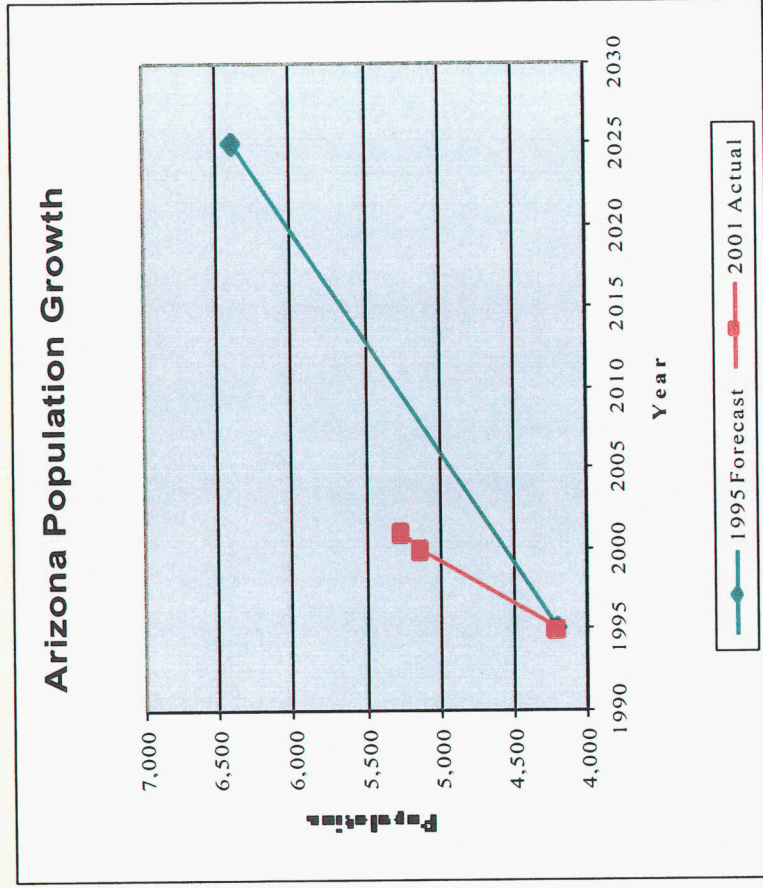


WSCC 10 - Year Coordinated Plan Summary 2001-2010, August 2001 and 2000-2009, October 2000

Increased Power Demand from Population Growth

- Arizona's population growth

- twice the national average growth from 1995 to 2025
- fourth fastest growing state
- growth in 2001 projected to be 2.7% above 2000 levels



“The official [2000] population count, 5,130,632, was nearly 1.5 million more than in 1990, surprising even experts who have experienced Arizona's dramatic growth firsthand.” — *THE ARIZONA REPUBLIC*, December 2001

The Status and Certainty of Projects is constantly changing

- “Energy companies are scaling back construction of new power plants to cope with low wholesale electricity prices and market jitters over high levels of corporate debt. New data show that some 18% of all announced projects already are effectively dead, nearly double the attrition rate a year ago.”

THE WALL STREET JOURNAL, Friday, January 04, 2002

- From various discussions at the December 2001 PowerGen Conference:
 - Panda - Gila River - Will not move forward as planned with the second 1,000 MW block - will stop at foundations.
 - Springerville 3&4 (TEP) - May be cancelled or significantly delayed.
 - Reliant - Signal Peak may not proceed ahead at all due to interconnection issues.
 - Montezuma - Likely to be cancelled.
 - Big Sandy 1-2 (Caithness) - Temporarily dead.
 - Red Hawk 3&4 - Possible conversion to simple cycle.

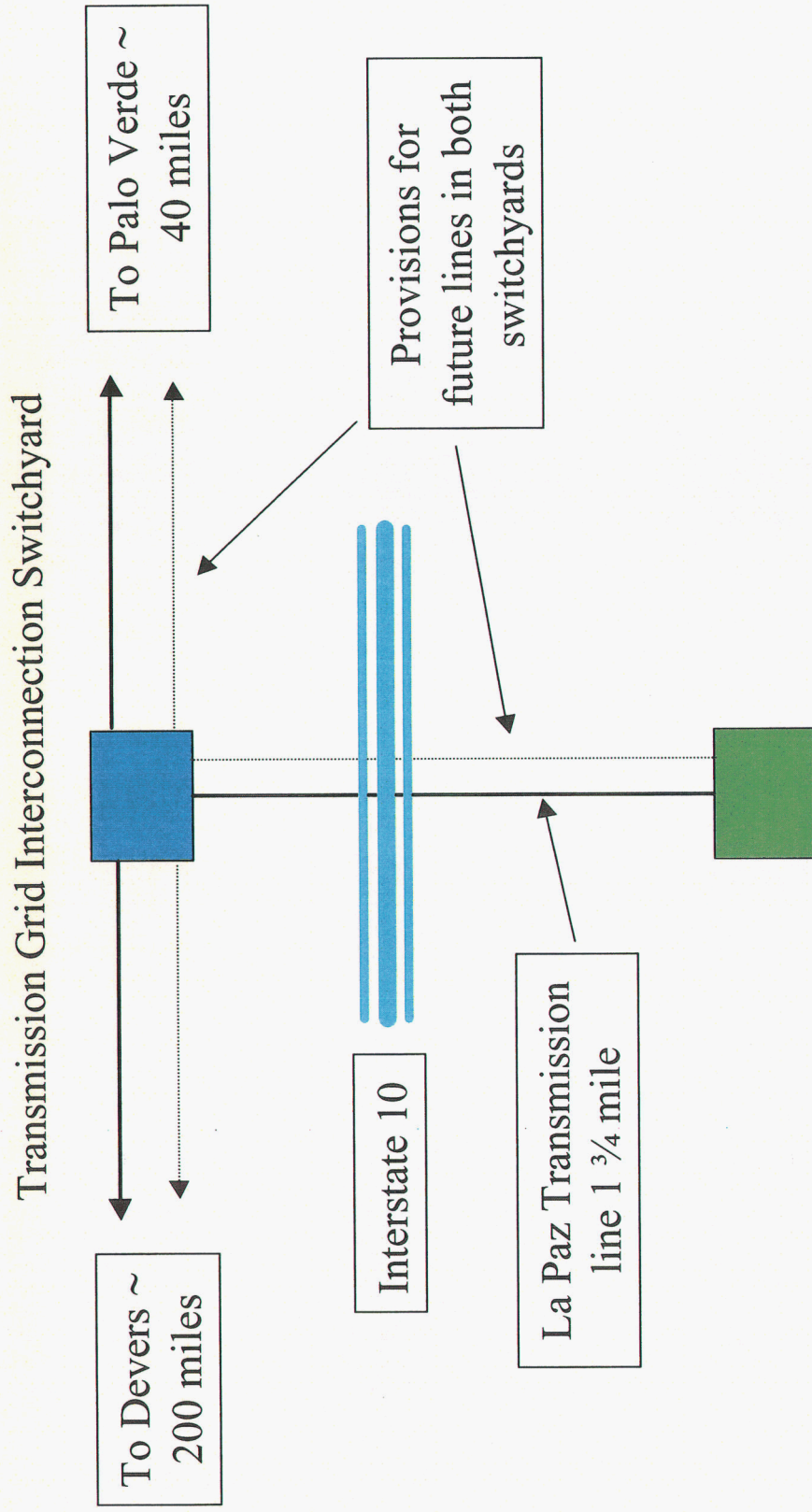
Comments on the Marcus Testimony

- "To the extent that the La Paz project output will be contractually sold outside of Arizona, it will make no contribution to Arizona reliability." Consider that Allegheny has transmission rights from California for sales into Arizona and has sold 1 million MW-hours to Arizona utilities over the last 30 months. Further, any plant built and running in a region increases reliability in that region.
- Several references were made to projects under development or under construction within the AZ/NM/SNV region without references or names. In some cases the reference did not match the values quoted. Also, a California Energy Commission prospect list is used based on news releases, announced developments, filings, etc. as a source for Arizona plants.
- The precise need for more power and more efficient power is uncertain. In the past, utilities took risks, often at consumer expense, in an attempt to precisely meet growth with new projects. But in a competitive market, the consumer is not at risk so long as an ample supply is present.
- Ample supply is key to a robust competitive market and it will to some extent control itself by slowing or not building some projects as merchants watch the market. Not all projects or phases of projects will be built as planned or ever.



Allegheny Energy Supply
an Allegheny Energy company

Project Grid Interconnection Diagram



La Paz Plant &
Plant Switchyard

Groups and Utilities that will review the Project Interconnection to the Grid

As part of the interconnection process, numerous studies and agreements are prepared, discussed and reviewed by those parties having a stakeholder interest in the Grid.

- Arizona Corporation Commission and Staff
- Southern California Edison, Interconnecting Transmission Owner
- California Independent System Operator, Interconnection Transmission Operator
- Federal Energy Regulatory Commission, Interconnection Agreement Regulator
- Western Systems Coordinating Council, NERC Reliability Group
- Western Arizona Transmission System (WATS), Reliability Group
- Palo Verde Engineering & Operations Group, Reliability Group
- Nuclear Regulatory Commission, Connections at/near Nuclear facilities
- Southwest Regional Transmission Association, Reliability Group
- Western Regional Transmission Association, Reliability Group
- Arizona Public Service, Specialty Studies

Summary of Power System Benefits to Arizona from the Project

- Increased merchant power supply, and meeting new growth
- Providing opportunity to retire more costly and less environmentally friendly plants
- Commitment of up to \$25 million in transmission upgrades to the Arizona Transmission Grid, and \$2.5 million more at the Palo Verde Hub.
- Commitment to reserve sharing
- Commitment of up to 10% of the plant for ancillary services
- Increased Palo Verde - Devers transmission reliability with new Project interconnection switchyard
- Provision for development of new local power grid near the Project
- Provision for future interconnection and expansion of other regional transmission lines to the Project

Chapter 4: Dry Cooling

INTRODUCTION

This chapter addresses the use and performance of dry cooling systems at power plants. Dry cooling systems transfer heat to the atmosphere without the evaporative loss of water. There are two types of dry cooling systems for power plant applications: direct dry cooling and indirect dry cooling. Direct dry cooling systems utilize air to directly condense steam, while indirect dry cooling systems utilize a closed cycle water cooling system to condense steam, and the heated water is then air cooled. Indirect dry cooling generally applies to retrofit situations at existing power plants

because a water-cooled condenser would already be in place for a once-through or recirculated cooling system. Therefore, indirect dry cooling systems are not further considered in the Chapter for new sources subject to this regulation.

The most common type of direct dry cooling systems (towers) for new power plants are recirculated cooling systems with mechanical draft towers. Natural draft towers are infrequently used for installations in the United States and were not considered for evaluation in this Chapter.

For dry cooling towers the turbine exhaust steam exits directly to an air-cooled, finned-tube condenser. The arrangement of the finned tubes are most generally of an A-frame pattern to reduce the land area required. However, due to the fact that dry cooling towers do not evaporate water for heat transfer, the towers are quite large in comparison to similarly sized wet cooling towers. Because dry cooling towers rely on sensible heat transfer, a large quantity of air must be forced across the finned tubes by fans to improve heat rejection. The number of fans is therefore larger than would be used in a mechanical draft wet cooling tower.

Hybrid wet-dry cooling towers employ both a wet section and dry section and are used primarily to reduce or eliminate the vapor plumes associated with wet cooling towers. For the most common type of hybrid system, exhaust steam flows through smooth tubes, where it is condensed by a mixture of cascading water and air. The water and air move in a downward direction across the tube bundles and the air is forced upward for discharge to the atmosphere. The falling water is collected and recirculated, similarly to a wet cooling tower. The water usage of a hybrid system is generally one-third to one-half of that for a wet cooling system and the required pumping head is reduced somewhat. In the Agency's opinion, the common hybrid systems do not dramatically reduce water use as compared to wet cooling towers. The comparative cost increases of the hybrid systems to the wet cooling systems do not outweigh water use savings of approximately one-half to two-thirds. Therefore, the discussion of dry cooling towers for the remainder of the chapter focuses on direct dry cooling systems exclusively.

The key feature of dry cooling systems is that no evaporative cooling or release of heat to surface water occurs. As a result, water consumption rates are very low compared to wet cooling systems. Since the unit does not rely in principle on evaporative cooling as does a wet cooling tower, larger volumes of air must be passed through the

Chapter Contents

4.1	Demonstrated Dry Cooling Projects	4-2
4.2	Impacts of Dry Cooling	4-2
4.2.1	Cooling Water Reduction	4-6
4.2.2	Environmental and Energy Impacts	4-6
4.2.3	Costs of Dry Cooling	4-6
4.2.4	Methodology for Dry Cooling Cost Estimates	4-8
4.2.5	Economic Impacts	4-8
4.3	Evaluation of Dry Cooling as BTA	4-13
	References	4-14

4.1.6 Economic Impacts of Dry Cooling

EPA concluded that the costs of dry cooling systems may be significantly prohibitive so as to pose barriers to entry for some new plants. EPA projected that the cost to revenue impacts exceed 10 percent for 12 new power plants and exceed 4 percent for all new plants under a dry cooling-based regulatory alternative. EPA considers this level of cost to revenue impacts to be significant. In comparison, the cost to revenue impacts of the final rule, which is based in part on flow reduction commensurate with that achieved using recirculating closed-cycle wet cooling, do not exceed 3 percent for a single facility, and the vast majority of the impacts are below 1 percent. A complete discussion of the cost to revenue impacts and discussion of barrier to entry analysis can be found in the Economic Analysis for the final rule. As such, regional subcategorization options would pose similar barriers to entry for new plants in the Northeastern United States, combined with imposing competitive disadvantages for the subset of facilities complying with more stringent and costly standards than the other regions of the country.

EPA is concerned that the barrier to entry, high costs, and energy penalty of dry cooling systems may remove the incentive for replacing older coal-fired power plants with more efficient and environmentally favorable new combined-cycle facilities. By basing the requirements of the rule on dry cooling, regulated entities faced with the prospects of building new facility power plants that are required to utilize dry cooling would, instead of beginning or continuing with the new facility project, turn to existing power-plants (many of which are significantly aged) and attempt to extend their operating lives further or refurbish them such that the new facility rule would not apply.

EPA notes that there have been recent advances in the efficiency of power plants, specifically combined-cycle plants, that have many environmental advantages. Combined-cycle plants produce significantly less air emissions of NO_x, SO₂, and Hg per MWh generated, use less water for condensing of steam than fossil-fueled or nuclear plants (greater than one-half water use reduction per MWh of generation), and are significantly more energy efficient in their generation of electricity than comparable coal-fired plants. The Agency does not wish to create disincentives for the construction of new efficient plants such as these.

4.3 EVALUATION OF DRY COOLING AS BTA

This section presents a summary of EPA's evaluation of the dry cooling technology as a candidate for best technology available to minimize adverse environmental impacts. Based on the information presented in the previous sections, EPA concluded that dry cooling systems do not represent the best technology available for a national requirement and under the subcategorization strategies described above.

First, EPA concluded that dry cooling is not adequately demonstrated for all facilities within the scope of this regulation. As noted previously, the majority of operating or planned dry cooling systems are located either in colder or arid climates where the average dry bulb temperatures of ambient air is amenable to dry cooling. As demonstrated in Chapter 3, the comparative energy penalty of a dry cooling plant in a hot environment at peak summer conditions can exceed 12 percent at a facility, thereby making dry cooling extremely unfavorable in many areas of the U.S. for some types of power plant types.

EPA's record demonstrates that of the demonstrated, permitted, or planned power plants in the Northeastern United States with dry cooling, the size and capacity of these dry cooling systems is considerably smaller than that necessary to condense the steam load for even below average sized coal-fired power plants projected within the scope of this rule.

Dry cooling technology has a detrimental effect on electricity production by reducing energy efficiency of steam turbines, especially in warmer climates. The reduced energy efficiency of the dry cooling system will have the effect of increasing air emissions from power plants.

Lastly, EPA concluded that the costs of dry cooling systems may be significantly prohibitive so as to pose barriers to entry for some new plants that may discourage the construction of new, more energy efficient plants.

In addition to the technical feasibility and cost impacts of dry cooling, EPA also evaluated the expected benefits that would be achieved by dry cooling. EPA notes that the two-track option based on reducing intake flow to a level commensurate with wet cooling towers reduces intake flows by 92 to 95 percent over a once-through system. Dry cooling would only reduce intake flow by an additional 4 to 7 percent. Additionally, the selected option requires velocity and design and construction technology-based performance requirements for the remaining intake flow. These performance requirements are expected to further decrease the negative environmental impacts of the cooling water intake flow, thereby reducing impingement and entrainment of organisms to dramatically low levels. See Chapter 5 for discussion of design and construction technologies to reduce impingement and entrainment.

In summary, EPA concluded that dry cooling is not technically or economically feasible for all facilities subject to this rule, would increase air emissions due to the energy penalty, has a cost more than three times that of the selected regulatory option, and would not significantly reduce impingement and entrainment beyond the regulatory approach selected by EPA to offset these drawbacks. For these reasons, EPA concluded that dry cooling does not represent the "best technology available" for minimizing adverse environmental impact.

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